DOCUMENT RESUME

ED 196 539 PS 011 893

TITLE	SNAC: San Mateo Nutrition Activity Curriculum. "Swing Into Nutrition" (Kindergarten - Fifth Grade).
INSTITUTION	San Mateo City Elementary School District, Calif.
SPONS AGENCY	California State Dept. of Education, Sacramento.
PUB DATE	Jan 80
NOTE	598p.: For other guides in this program, see PS 011 894-896.
EDRS PRICE	MF03/PC24 Plus Postage.
DESCRIPTORS	*Curriculum Guides: *Educational Objectives: Educational Resources: Elementary Education: *Elementary School Students: *Kindergarten Children: *Learning Activities: *Nutrition Instruction: Student Motivation

ABSTRACT

The primary goal of the San Mateo Nutrition Activity Curriculum (SNAC) is to assist the development and improvement of healthful food habits among kindergarten through fifth grade students. The curriculum is based on five concepts: food choices and health: factors influencing food choices: food related careers: consumer competencies: and food safety and sanitation. The curriculum is multidisciplinary. Cognitive and affective objectives in language arts, science, health, social studies, and math are integrated with nutrition concepts and synthesized with appropriate instructional methods. Each lesson contains directions which include behavioral and process objectives, a conceptual focus, teacher information, materials needed or suggested, specific directions for motivation and activities, suggestions for evaluating pupil performance, and additional resources and activities. Cooking and food preparation activities are occasionally suggested. Enrichment lessons for reinforcing previous material are provided at the end of each of the six curriculum guides. (Author/RH)

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SNAC

San Mateo Nutrition Activity Curriculum

"Swing Into Nutrition"

SAN MATEO CITY SCHOOL DISTRICT
50 Peninsula Avenue
P.O. Box K
San Mateo, California 94402

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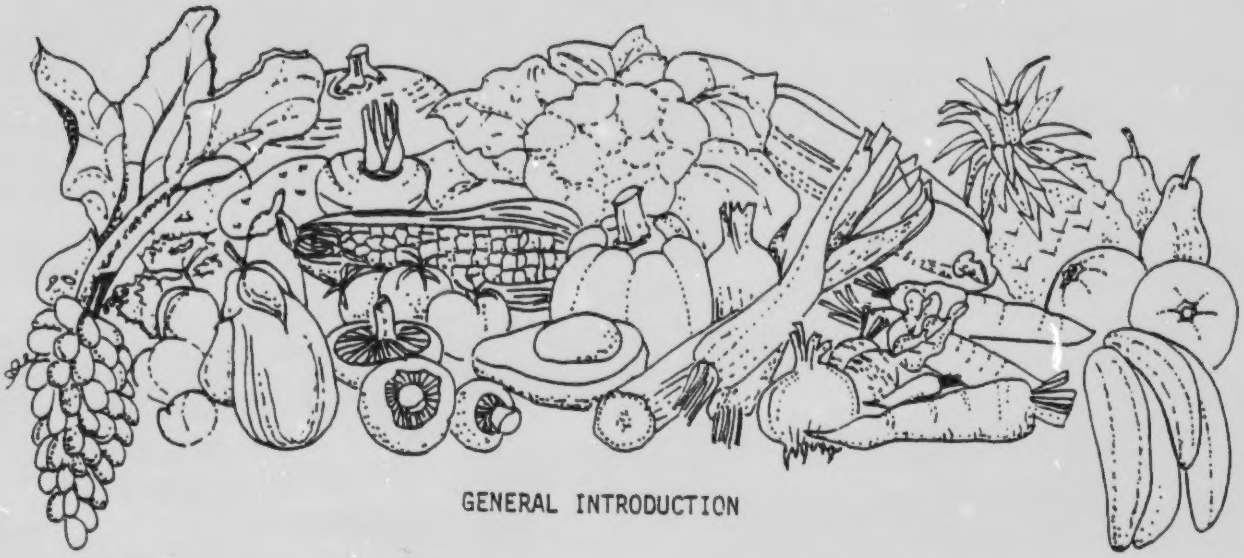
Project Director

Funded 1976-80 By California State Department of Education
1975 Child Nutrition Facilities Act

January 1980
San Mateo City School District

PS 011893



GENERAL INTRODUCTION

Nutrition Education starts with you! The San Mateo City School District has designed a program in the elementary grades to integrate nutrition education into the general curriculum.

The goal of this program is to prepare elementary grade students to develop and improve healthful food habits. By the time the student leaves the elementary school, he/she should understand the relationship between food habits and well-being; should express concern that his/her food choices promote well-being; should demonstrate a willingness to taste new foods; and should be prepared to make informed decisions regarding his/her food choices. To achieve these purposes, the program focuses on the theme:

"SWING INTO NUTRITION!"

The program needs and encourages active support and involvement of students, parents, and staff members of a multicultural population. The program is based on five concepts:

(A) Food Choices and Health
(B) Factors influencing Food Choices
(C) Food Related Careers
(D) Consumer Competencies
(E) Food Safety and Sanitation

It is a multi-disciplinary curriculum in which cognitive and effective objectives in all subject areas including language arts, science, health, social studies, and math are integrated with nutrition concepts and synthesized with appropriate process goals (teaching and instructional methods). These process goals have three sources: the person, society, and the disciplines.

Each lesson contains directions which include behavioral and process objectives, a concept focus which is indicated by a letter in the upper left-hand corner, teacher information, materials needed or suggested, specific directions for motivation and activities, evaluation or pupil performance, and additional resources and activities. Cooking and food preparation activities are occasionally suggested. To supplement these activities, a wide collection of cookbooks and recipes are available in the Project Resource Library.

The lessons are numbered in sequence, but the teacher may rearrange the lessons to suit classroom needs and schedule. In addition to these lessons, there are ENRICHMENT lessons at the end of each Curriculum Guide to reinforce previous lessons.

All of the lessons and activities mentioned in this Curriculum Guide have been designed, tested, evaluated and articulated by Project teachers and nutritionists. They have proven effective for all participants.

Remember: The nutrition activities involving children are not only educational but fun. So join us and ......

"SWING INTO NUTRITION!"

ACKNOWLEDGEMENTS

Many, many people have helped and contributed valuable time in the development, teaching, and evaluation of the San Mateo Nutrition Education Project. The Nutrition Education Staff in San Mateo City School District wishes to acknowledge and thank these persons for their special achievements.

Food Service Director	Carvill Veech (Project Director 1976-79)
Nutrition Education Aide	Lenore Hicks
The Board of Education	Donald Hill Sue Lempert Albert Di Matteo Robert Braun Jeanne Schlueter
All Project K-5 Teachers	Laurel School North Shoreview School
Project Principals	Warren Kofler Charles Moorer
Graphic Artists	Brooke Travers William Kirk David Moore

AND

School Food Service staff members, parents, school nurses, the Project Evaluator Howard Wolff, Ph.D., Special Curriculum Consultant Anna Nuernberger, and Nutrition Education secretarial staff, especially Althea Jocz and Barbara Harris.

SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

(SNAC)

"SWING INTO NUTRITION!"

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SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

CURRICULUM GUIDE

Kindergarten

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
1	Our Tasters	To identify two ways the student can use physical senses about foods.	A,B	Health Oral Language	1
	"Your Food Tasters" *Worksheet*	To identify the physical sense about foods.	A,B	Health Oral Language	3
2	Apples To Sauce	To identify different forms in which the same food can be eaten; raw, cooked or as juice.	A	Health	4
	"Applesauce Recipe" *Recipe*	To practice preparation methods of apples raw or cooked.	A,E	Health	5
	"The Little Red House With No Doors and No Windows" *Flannelboard Story*	To hear a creative story about the apple; to create more stories about apples.	A	Science Health Reading Art	8
3	Feeling Good All Over	To develop good health habits including eating heath promoting foods.	A	Health	15
	"Everyday Activities" *Pictures (Fill-in)*	To identify everyday activities; eating, playing, sleeping, and brushing teeth.	A	Health Art	17
4	Happy-Healthy Teeth	To prevent cavities by eating the proper foods, flossing and brushing.	A,C	Health Social Studies	22
	"A Toothful Story" *Flannelboard Story*	To prevent cavities by proper eating.	A,C	Health Art	26
	"Healthy Snack List For Healthy Teeth" *Information List*	To identify with healthy snacks.	A,C	Health	34
	"Circle The Healthy Snacks" *Worksheet (Circling)*	To identify with healthy snacks.	A,C	Health	35

CURRICULUM GUIDE

Kindergarten

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
5	Let's Keep Food Clean	To identify two ways the student can help keep food clean and safe to eat.	E	Health	36
6	Good Manners	To develop good manners to use when eating.	B	Social Studies	39
7	How Do We Waste Food?	To identify one way to avoid food waste.	D	Health	44
8	What Do Plants Need To Grow?	To identify water, soil and sunlight as three things necessary to grow plants in the ground.	D	Science	46
	"What Do Plants Need to Grow?" *Worksheet (circling)*	To identify with the things necessary to grow plants.	D	Science	49
	"Make a List of All The Things You Need To Make Me Grow." *(Writing)*	To reinforce the things needed to grow plants.	D	Science	50
9	Today I Ate A Plant	To identify the names of fruits and vegetables which are examples of the parts of a plant; leaf, stalk, root, flower, fruit.	D	Science	51
	"A Tree Is A Plant" *Worksheet (matching/art)*	To identify the parts of a tree.	D	Science Art	53
	"Today I Tasted" *Worksheet (fill-in)*	To experience the taste of different fruits and vegetables.	A,D	Science	55
10	Moooo! Baah! Oink! Cluck!	To identify foods from an animal.	D	Science	57
	"Circle The Foods From Animals" *Worksheet (circling)*	To reinforce which foods come from an annimal source.	D	Science	59

CURRICULUM GUIDE
Kindergarten

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
11	Career Game - How We Get Milk	To identify the role of the farmer, truck driver, storekeeper and parent in the availability of a food we eat.	C	Social Studies	60
	"Milk Career Song" *Song*	To reinforce the roles of the farmer, truck driver, storekeeper and parent.	C	Social Studies	61
	"Career Lotto Gameboard" *Game (identifying)*	To reinforce the identity of the farmer, truck driver, storekeeper and parent.	C	Science Art	62
12	What Does Television Tell Us?	To observe that television advertisement for food does not include many of the foods that are healthy.	D,B	Role Playing	65
13	We Eat Nuts ENRICHMENT	To identify two types of nuts we eat as a healthy snack food.	D	Science Math	68
	"Today I Tasted Nuts" *Worksheet (fill-in)*	To encourage tasting of new nuts.	A,D	Health Science	70
	"How Many In One Handful?" *Worksheet (fill-in)*	To discover new nuts and their outer appearance.	B,D	Science	71
	"Peanut Butter" *Recipe*	To practice preparation methods of peanuts.	A,E	Science Math	72
14	Making Raisins - Food Drying ENRICHMENT	To observe and describe one method of food preservation by the drying of a fruit.	E	Science Health	75
	"Raisin Recipe" *Recipe*	To practice the method of food preservation in the drying of grapes.	E	Science Health	77
	"Today I Tasted Fruits" *Worksheet (fill-in)*	To encourage tasting of new fruits different ways.	A,E	Science Health	78

Concept A, B

Kindergarten
Subject Area: Health
Oral Language

OUR TASTERS

Behavioral Objective: The student will identify two ways he/she can use physical senses to identify foods.
Generalization: There are many ways we find out about foods.

Process Objective: Developing an awareness of physical abilities, comparing; describing; demonstrate a willingness to explore unfamiliar situations.

Teacher Information: This activity is to introduce a variety of foods to the students in order to show that there are many foods they can learn about. This lesson also explores the individuals use of physical senses to show how we learn about foods. The senses can be reinforced throughout the year each time a new food is introduced to expand vocabulary skills and oral expression. In addition, the child will begin to develop body awareness.

Materials: "Your Food Tasters", student worksheet
Food samples
Blindford
Mystery box
Knife, paper towels

Vocabulary: food, eat, taste, feel, smell, see

ACTIVITY

Motivation:

Gather students into a circle on the floor. Ask them to point to their nose, eyes, mouth, fingers, and ears. Ask them how they learn about new things. (we see, feel, taste, smell, hear).

Development:

1. Show the class two fresh fruits. Can they describe them? Can they name them? Pass the food around so each child can smell, feel, and look at it. Name the food if the children were unable to do so.

2. Put one fruit in the mystery box and pass it around. Which one is in the box? How do they know?

3. Cut the fruits into bite-sized pieces for each child to taste. It is soft, hard, cold, smooth? Ask "How does our tongue help us learn about foods?"

4. To further clarify how our tongue helps us identify foods, have the children taste sugar and salt. Discuss how they are alike (looks, smell, feel) and different (taste).

Evaluation

Ask children to point to their "food tasters" on the worksheet "Your Food Tasters".

Did all the children actively participate in the activity? Did they appear to enjoy the "tasting"?

Additional Activity

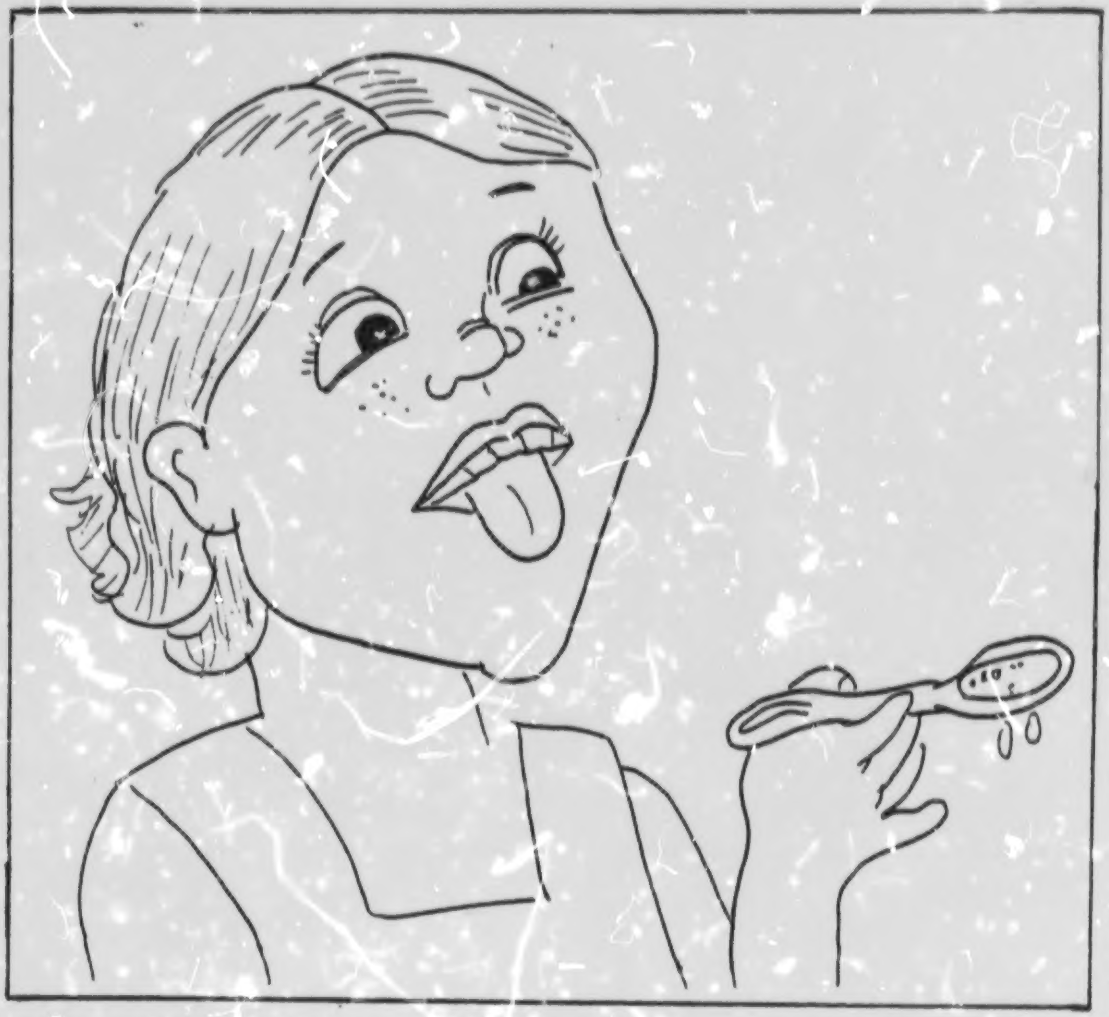
To show interdependence of senses.

Blindfold Taste Test Cut small pieces of raw apples and raw white potato. Have a blindfolded child taste each. Can they tell which is the apple without looking? Conclude that our eyes help us "taste" foods too.

Hold Your Nose As children taste mint flavored candy or toothpaste, have them hold their nose. Can they taste it? Then tell them to unplug their nose. Can they taste it now? (yes) Conclude that our nose helps us "taste" foods, too.

When we have a cold and our nose is stuffed up, sometimes food doesn't taste very good because our "nose taster" doesn't work.

YOUR FOOD TASTERS



WHAT DO YOU USE TO TASTE YOUR FOOD?

WHAT DO YOU USE TO SMELL YOUR FOOD?

WHAT DO YOU USE TO SEE YOUR FOOD?

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Concept A

Kindergarten

Subject Area: Health

APPLES TO SAUCE

Behavioral Objective:	The student will identify different forms in which the same food can be eaten; raw, cooked or as juice.
Process Objective:	Comparing, willingness to try new experiences.
Vocabulary:	Apple, applesauce, cook, raw.
Materials:	Apples (1 for each 2 children) Hot plate, covered saucepan, spoons, small knives, paper cups Applesauce recipe and ingredients Flannelboard story attached.
Motivation:	Hold up an apple - ask how we know it is an apple (see, feel, smell) Ask "What can we do with it." (eat it). "How many ways can we eat apples?" (Raw, applesauce, pie, juice, jelly, etc.)
Development:	Prepare applesauce as a class project. Let each child participate and taste. Have children compare raw apple with applesauce using senses of taste, sight, smell, feel. (Give each child a slice of raw apple and a small amount of applesauce in paper cup with spoon).
Evaluation:	Have students tell you which they liked best; raw apples or applesauce.

Additional Activities:

1. Read the story, "Little Red House with No Doors and No Windows" to the children -- (script attached).
2. Bring in additional foods and prepare in a different way-

   Possibilities: cream - butter, potatoes - mashed - Emphasize the many ways food can be changed by cutting, peeling, mashing, cooking and shaking.

Additional Resources:

Books: Rain Makes Applesauce by Scheur, J. and Belicka, M., Holiday House: New York, 1964.

Silly thought in words and pictures.

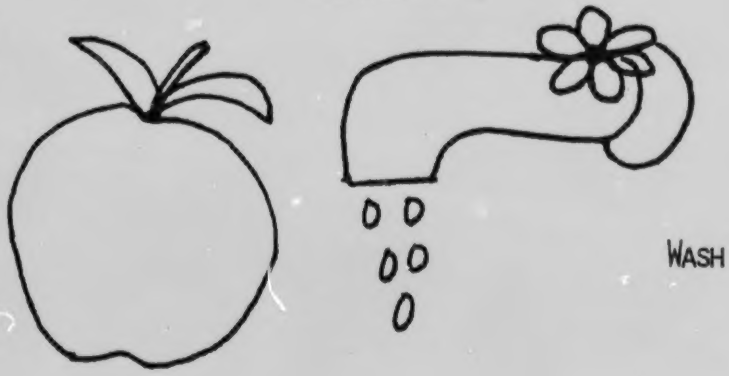
Ten Apples Up On Top by LeSieg, T., Random House, Inc. New York, 1961

Pickles Don't Grow on Trees by Morton, Louis, Random House
Shows food sources of children's favorite foods.
(Available from Project SNAC)

APPLESAUCE RECIPE

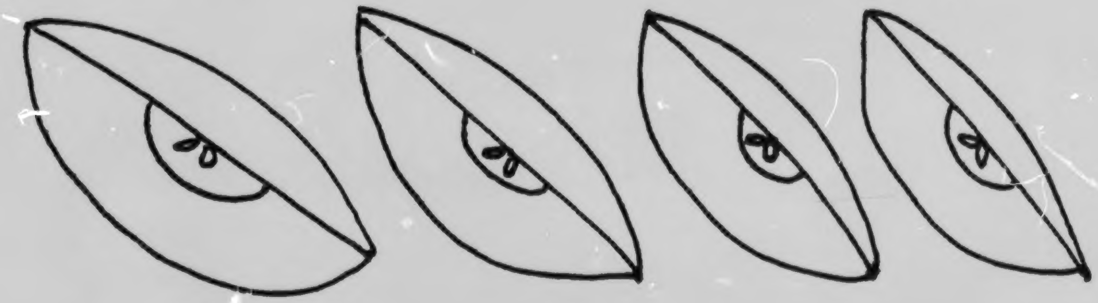
(SERVES 4)

1.



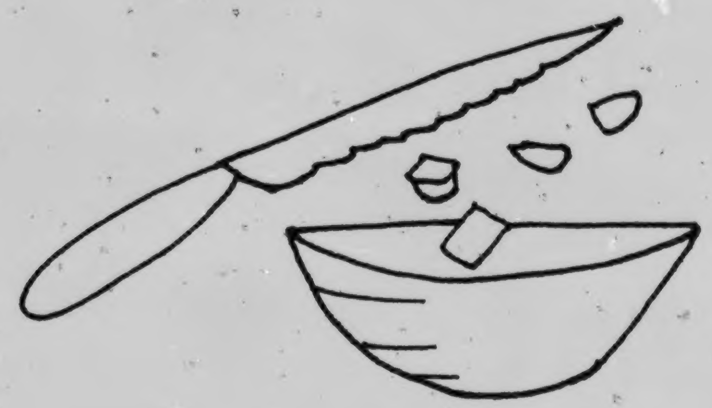
WASH AN APPLE.

2. CUT THE APPLE IN FOUR PARTS.



TAKE OUT THE CORE.

3.

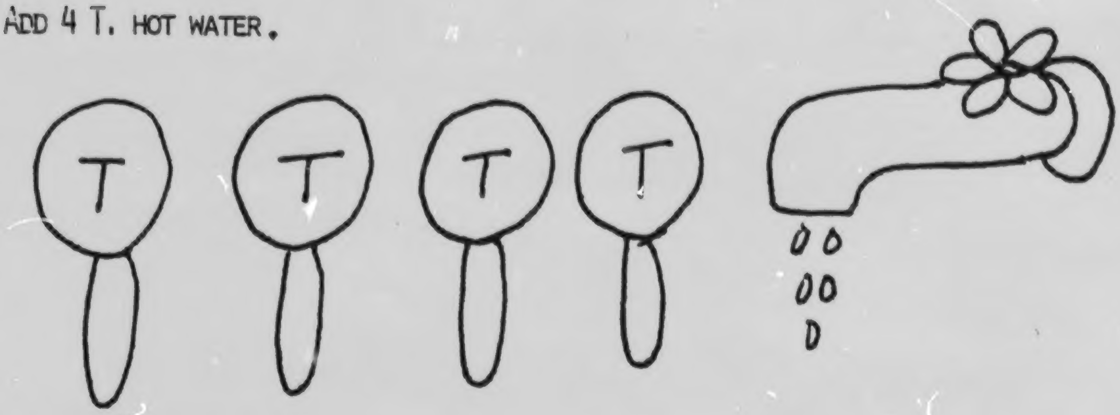


CUT THE APPLE INTO
TINY PIECES.

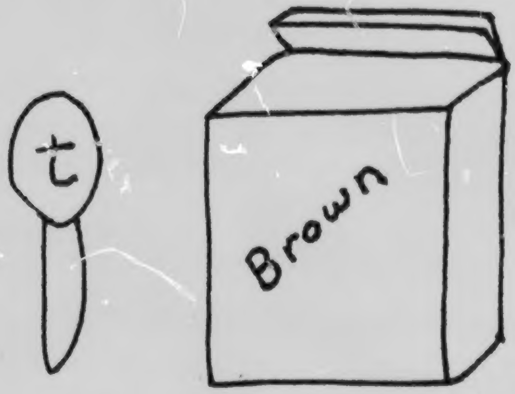
THIS RECIPE WILL SERVE FOUR FOR A SMALL SNACK.

NOTE: PLAN ON ONE APPLE FOR FOUR CHILDREN. LET EACH CHILD CUT ¼ APPLE INTO SMALL PIECES AND TAKE TURNS ADDING OTHER INGREDIENTS.

4. ADD 4 T. HOT WATER.



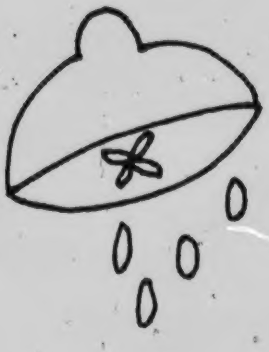
5.



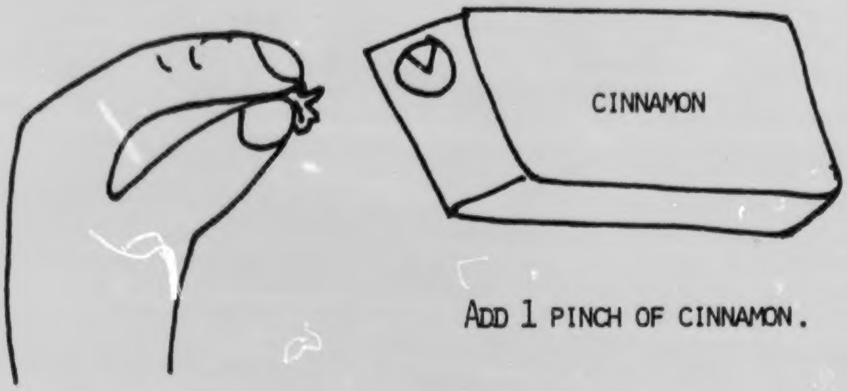
ADD 1 T. BROWN SUGAR.

6.

ADD 4 DROPS LEMON JUICE.

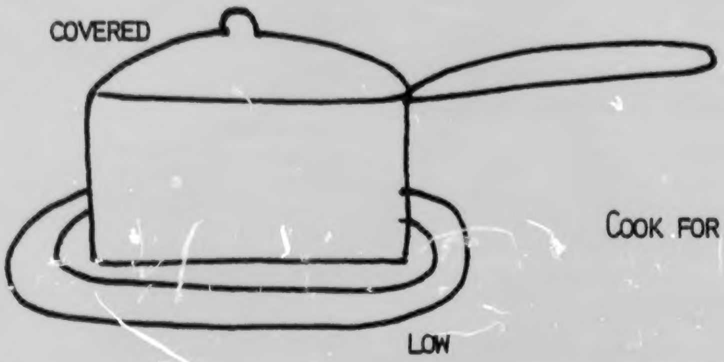


7.



ADD 1 PINCH OF CINNAMON.

8.



COOK FOR 10 MINUTES.

9.

EAT IT.

DISCUSSION QUESTIONS:

1. WHAT KIND OF FOOD IS AN APPLE? (FRUIT) WHAT ARE SOME OTHER FRUITS?
2. DO WE EAT THE APPLE SEEDS? (NO)
3. WHAT DO WE ADD TO APPLES TO MAKE APPLESAUCE? (WATER, SUGAR, CINNAMON, LEMON JUICE)
4. DO YOU LIKE TO MAKE FOODS? DO YOU LIKE TO TASTE NEW FOODS?

THE LITTLE RED HOUSE WITH NO DOORS AND NO WINDOWS

There was, once upon a time, a little boy who was tired of all his toys, books and play. "What shall I do?" he asked his mother. And his mother, who always knew beautiful things for little boys and girls to do, said, "You shall go on a journey and find a little red house with no doors and no windows and with a star inside."

Then the little boy's eyes grew big with wonder. "Which way shall I go to find a little red house with no doors or windows but with a star inside?" "Down the lane and past the farmer's house and over the hill," said his mother. "Come back as soon as you can and tell me all about your journey." So the little boy put on his jacket and started out.

He had not walked very far down the lane when he came to a merry little girl dancing along in the sunshine. Her cheeks were like pink blossom petals. "Do you know where I shall find a little red house with no doors and no windows and with a star inside?" the little boy asked her. The little girl laughed. "Ask my father, the farmer," she said. "Perhaps he knows."

So the little boy went on until he came to the great brown barn where the farmer kept barrels of fat potatoes and baskets of yellow squash and golden pumpkins. The farmer stood in the doorway looking over the green pastures and yellow grain fields. "Do you know where I shall find a little red house with no doors and no windows and with a star inside?" asked the little boy of the farmer. The farmer laughed too. "I've lived a great many years and I never saw one," he chuckled. "But ask Granny who lives at the foot of the hill. She knows how to make molasses candy and popcorn balls and red mittens. Perhaps she can direct you."

So the little boy went on further still, until he came to Granny sitting in her pretty garden. She was as wrinkled as a walnut and as smiling as the sunshine. "Please, dear Granny," said the little boy. "Where shall I find a little red house with no doors and no windows and a star inside?" Granny was knitting a red mitten, and when she heard the little boy's question she laughed so cheerfully that the wool ball rolled out of her lap and down the path.

"I should like to find that little house myself," she chuckled. "It would be warm when the frosty nights come and the starlight would be prettier than a candle. But ask the wind who blows about so much and listens at all the chimneys. Perhaps the wind can direct you."

So the little boy took off his cap politely to the Granny and went on up the hill rather sadly. He wondered if his mother, who knew almost everything, had made a mistake. The wind was coming down the hill as the little boy climbed up. As they met, the wind turned about and went along, singing, beside the little boy. It whistled in his ear and pushed him and dropped a pretty leaf in his hands.

"Oh wind," asked the little boy after they had gone along together quite a way, "Can you help me find a little red house with no doors and no windows and with a star inside?"

The wind cannot speak in our words, but it went singing ahead of the little boy until it came to an orchard. There it climbed up in an apple tree and shook the branches. When the little boy caught up with it, there at his feet lay a great rosy apple.

The little boy picked up the apple. It was as much as his two hands could hold. It was as red as the sun had been able to paint it, and the thick brown stem stood up as straight as a chimney. But it has no doors and no windows. Was there a star inside?

"I wonder," thought the little boy. He took his jackknife from his pocket and cut the apple through the center. Oh how wonderful. There inside the apple lay a star holding brown seeds.

The little boy ran home to his mother and gave her the apple.

"It is too wonderful to eat an apple without looking at the star, isn't it" he asked.

"Yes, indeed," said his mother.

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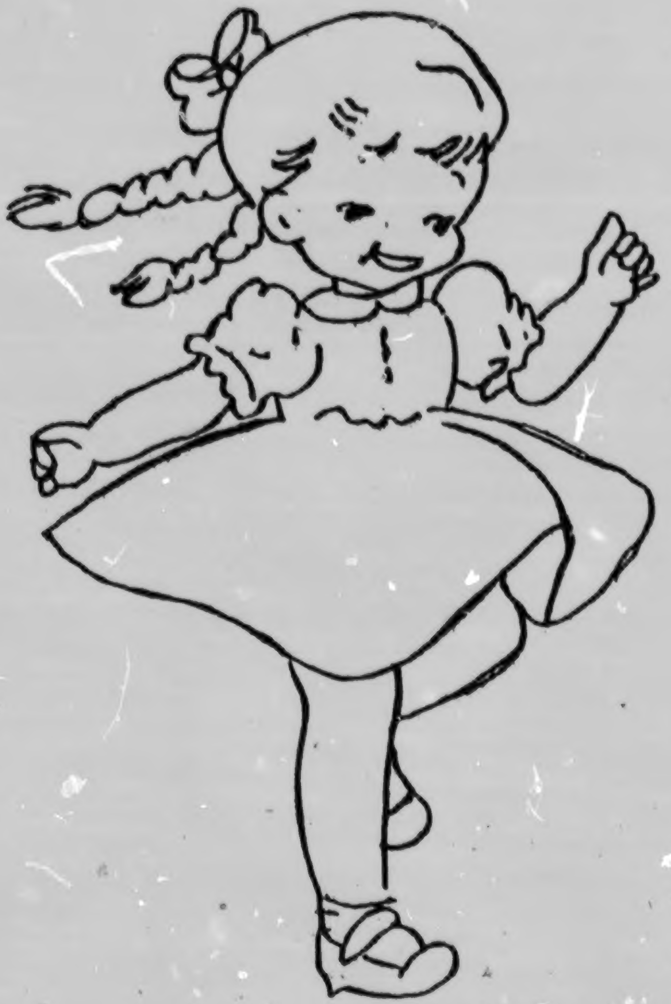
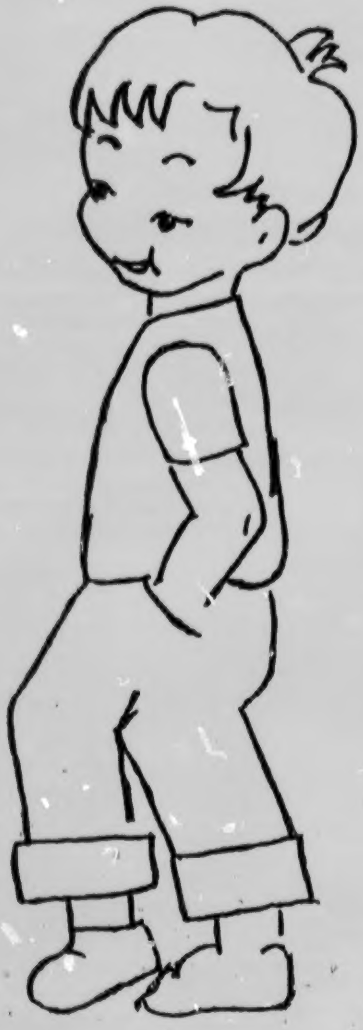


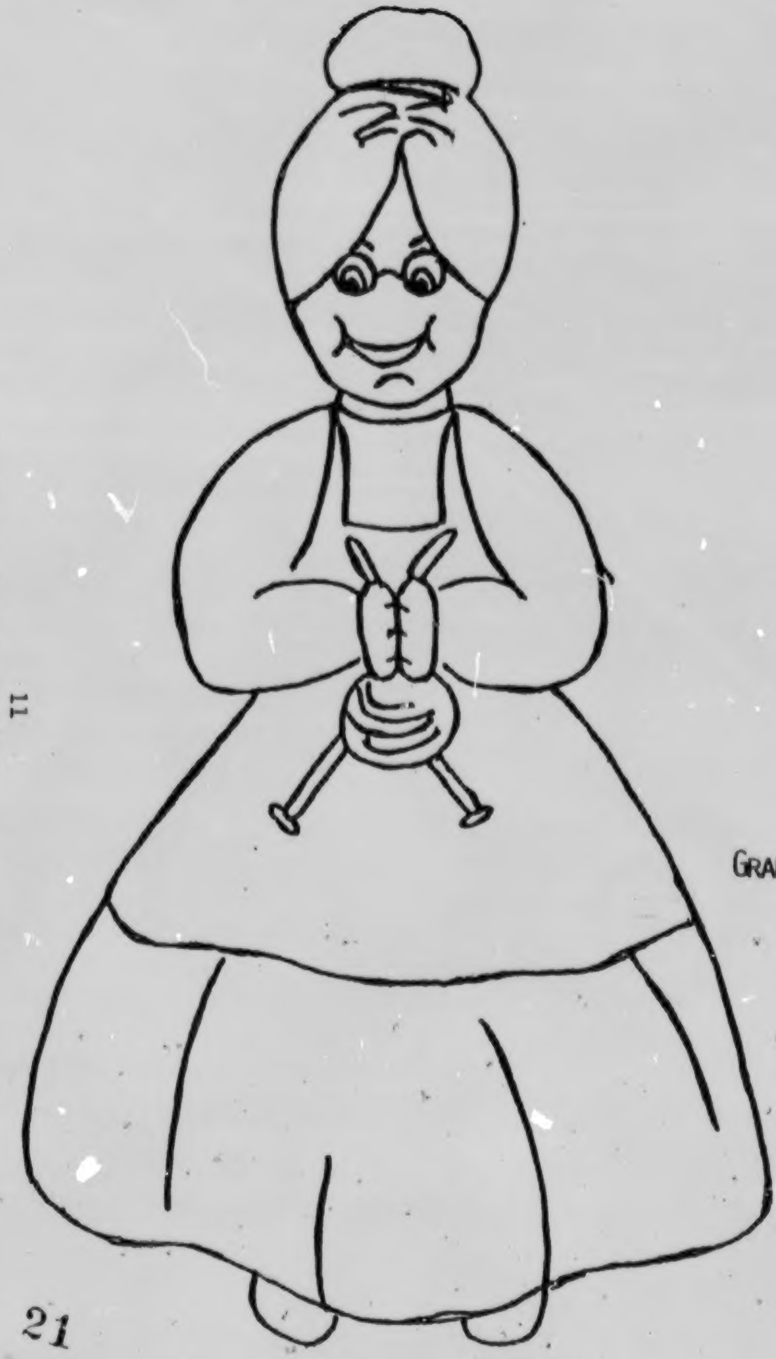
GIRL



BOY

20

19



GRANNY

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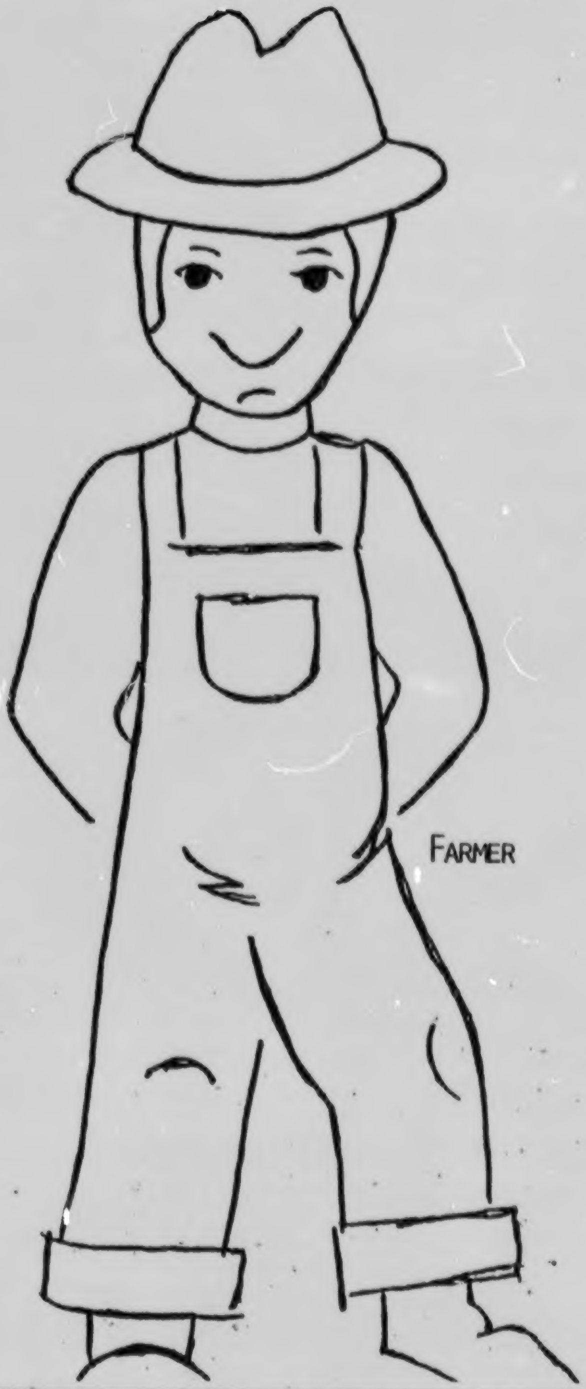

FARMER

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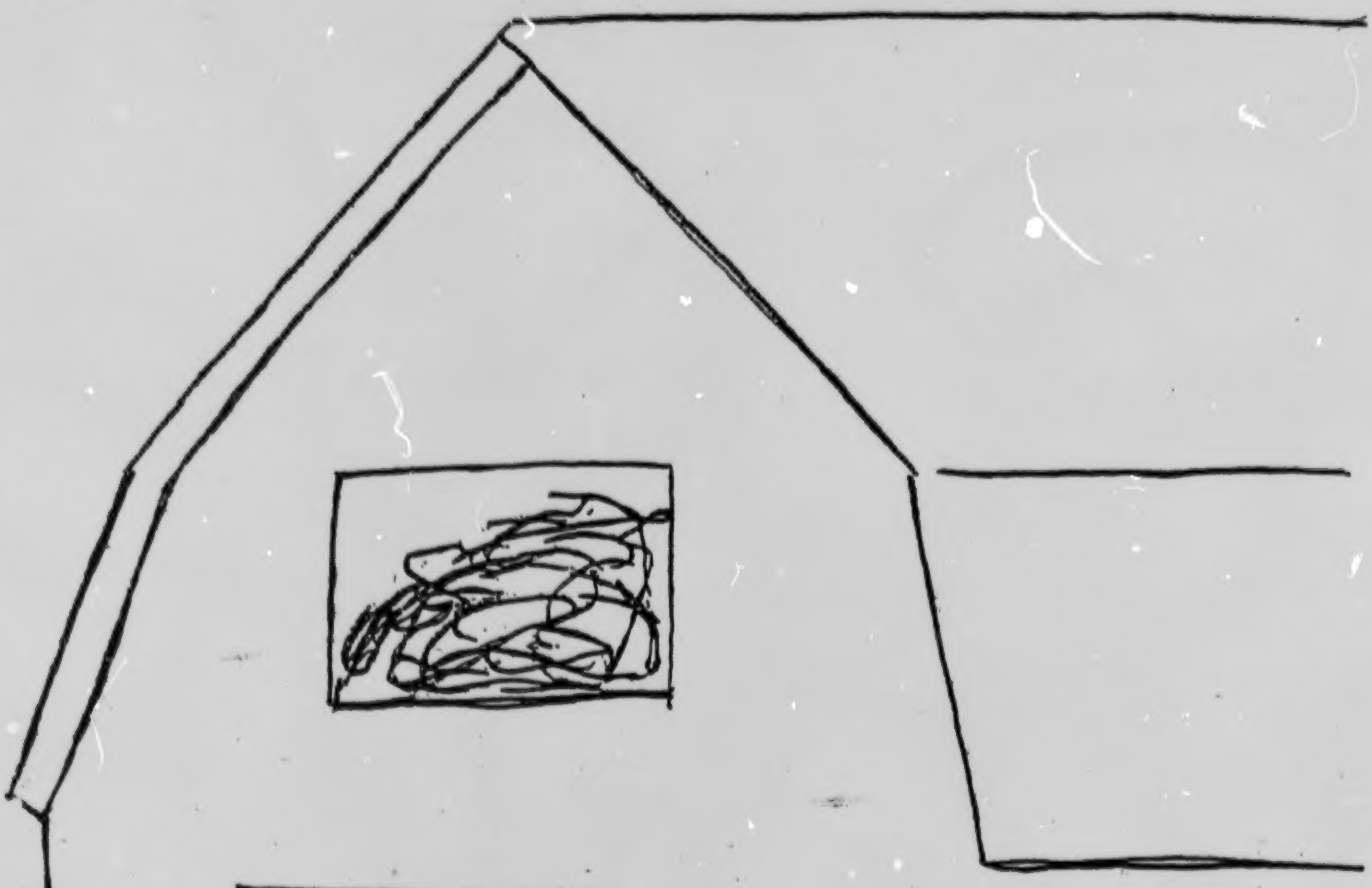
BARN 23

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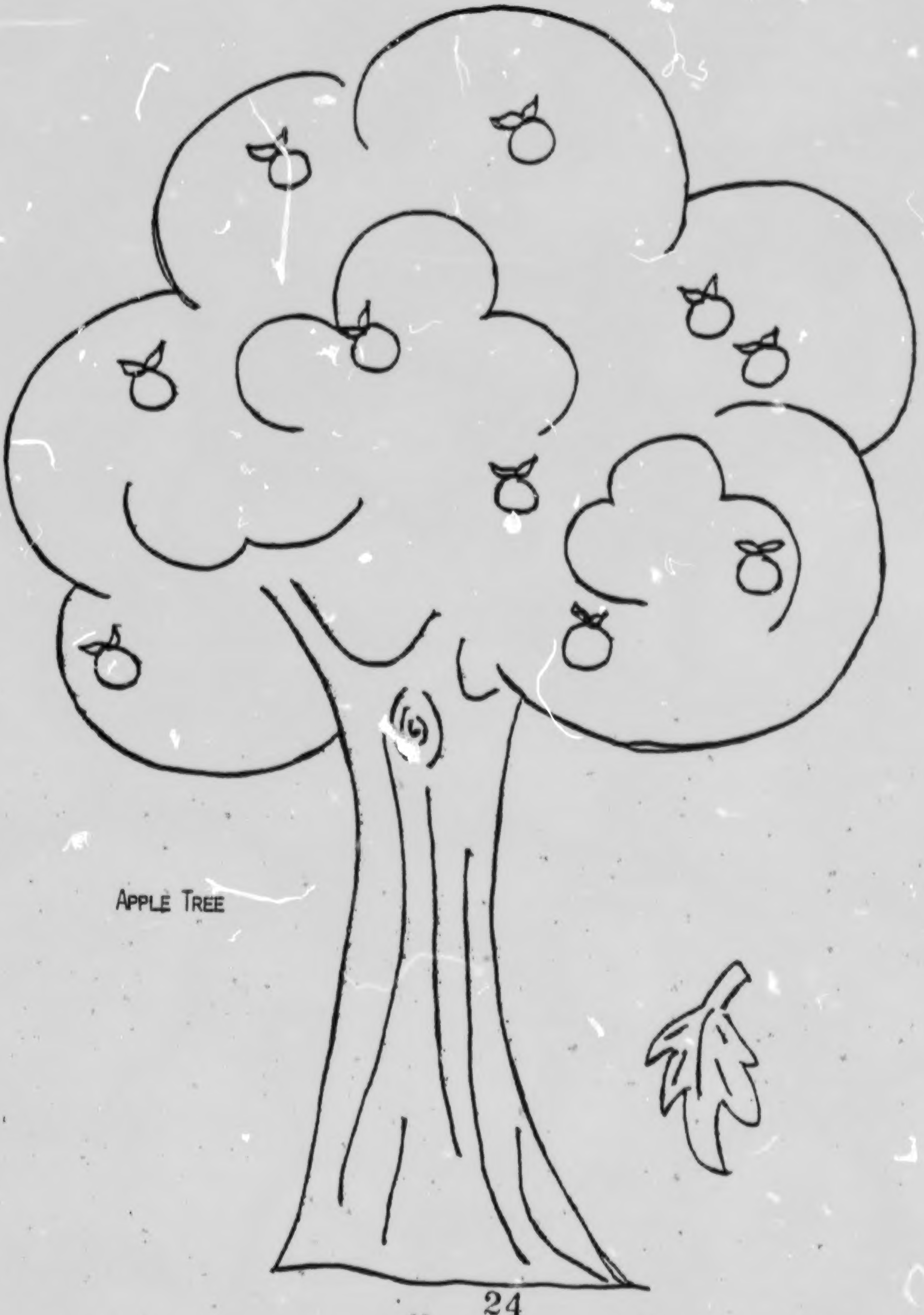

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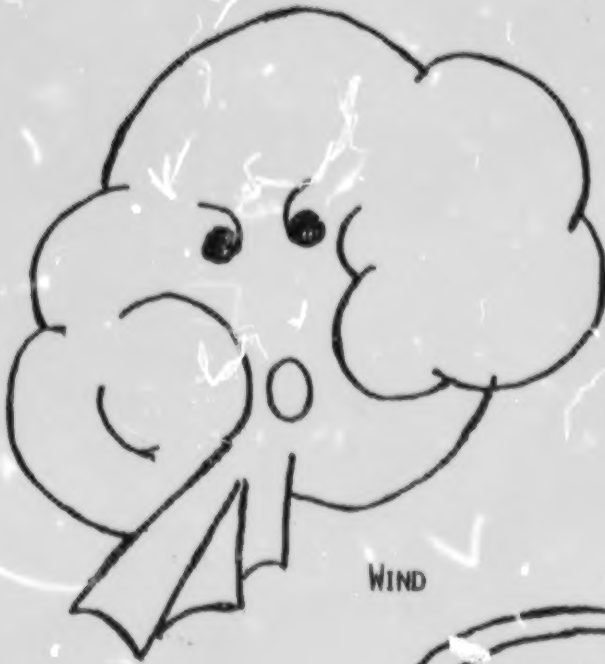
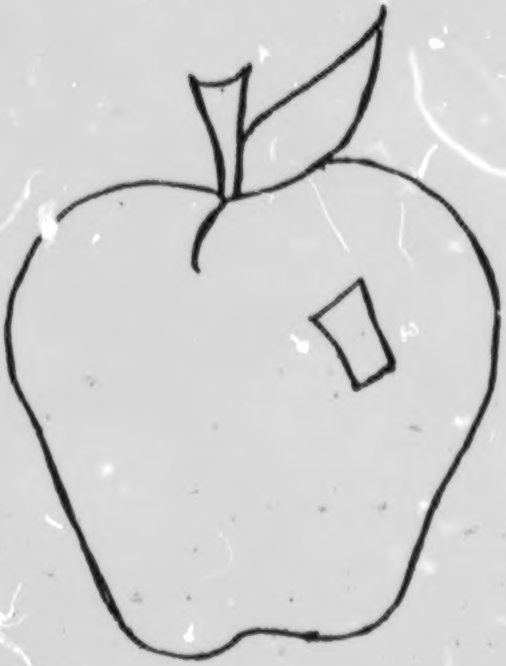


WIND



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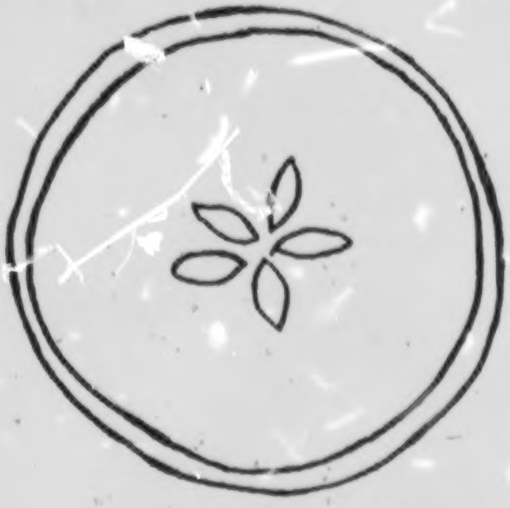
APPLE



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STAR

Concept A

Kindergarten
Subject Area: Health

FEELING GOOD ALL OVER

Behavioral Objective: The student will name good health habits including eating health promoting foods.

Process Objective: Motivation to teach oneself, understanding the use of information and ideas.

Teacher Information: This lesson is a discussion to introduce good health habits The five good health habits introduced are cleanliness, rest, exercise, fresh air, and eating healthy foods.

Two good health habits - cleanliness and eating proper foods will be explored in more depth in later lessons.

Materials: Pictures of children involved in everyday activities
(eating, playing, sleeping, brushing teeth)
toothbrush
soap

Vocabulary: healthy, brush, wash, soap, sleep, exercise, fresh air, germs

ACTIVITY

Motivation:

Show the pictures of children doing every-day activities related to health. As a child to describe what is happening.

Conclude that many of the things the boys and girls are doing help keep them healthy (or help to make them feel good).

Explain to the class that they will be learning how to take care of themselves so that they can feel good.

Development:

1. Cleanliness
Hold up a picture of toothbrush and a bar of soap. Ask "What do you do with soap? What makes a bar of soap and a toothbrush alike?" (They both help to keep us clean.

Ask children to describe what they know about how to brush teeth, and why it is important.

Ask children to tell how they wash their hands and why and when they should wash their hands. Ask them if they know why they should wash their hands before they eat. (To remove dirt and germs.)

Germs can make us sick. Germs grow in dirty places.

2. Sleep
What do we do every night? (sleep) Why do we need to sleep? (To stay healthy.) Do you take naps? Why do you think naps are good for us?

3. Exercise
Do you know what exercise is? It's running, playing, and working. What kind of exercise do you like? Exercise helps keep you feel good. (The children may enjoy doing a few exercises at this point.)

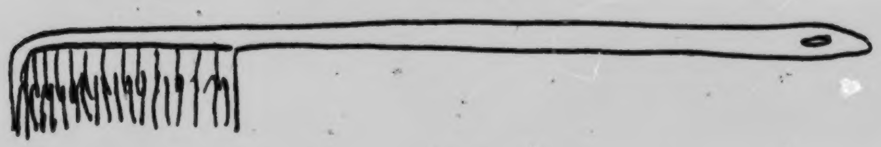
4. Fresh Air
Breathe deep (Demonstrate) Let it out. Breathe in and out again. What are you breathing in and out? You breathe in air. Lots of clean fresh air helps you stay healthy, too. Where do we get lots of fresh air? (Outdoors)

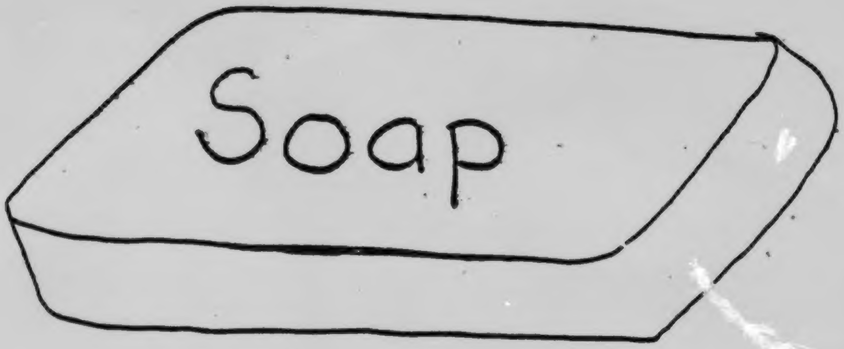
5. Eating Proper Foods
One of the most important things we can do to feel good is to eat good foods. Can you name some foods that are good for you? Can you name foods that don't help you feel good? What about your teeth - what kinds of food hurt them? (sugar) What kinds of food helps your teeth to be strong? (milk) Many kinds of foods are good for you. If you want to feel good be sure to eat foods that are good for you every day.

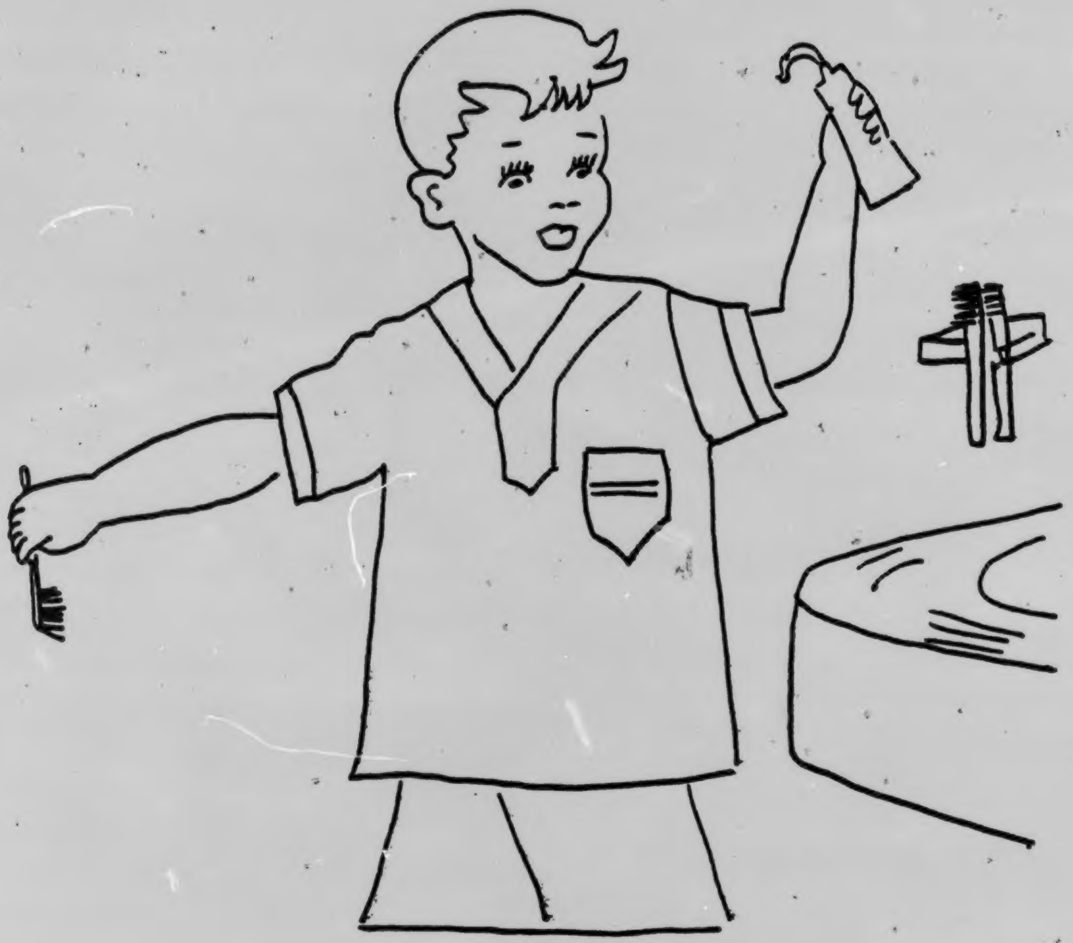
Evaluation

Ask children to name five or six things that keep us strong and healthy - brushing teeth, washing hands, exercise, sleep, fresh air, eating foods that are good for you.

tooth brush







MY FRIENDS ALL LIKE A SMILE THAT'S BRIGHT,

SO I MUST BRUSH MY TEETH EVERY NIGHT.

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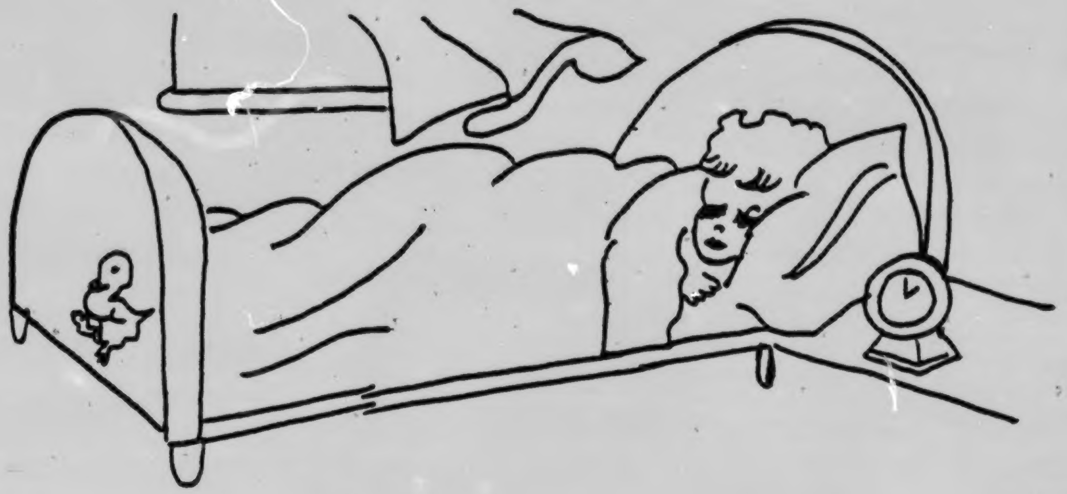
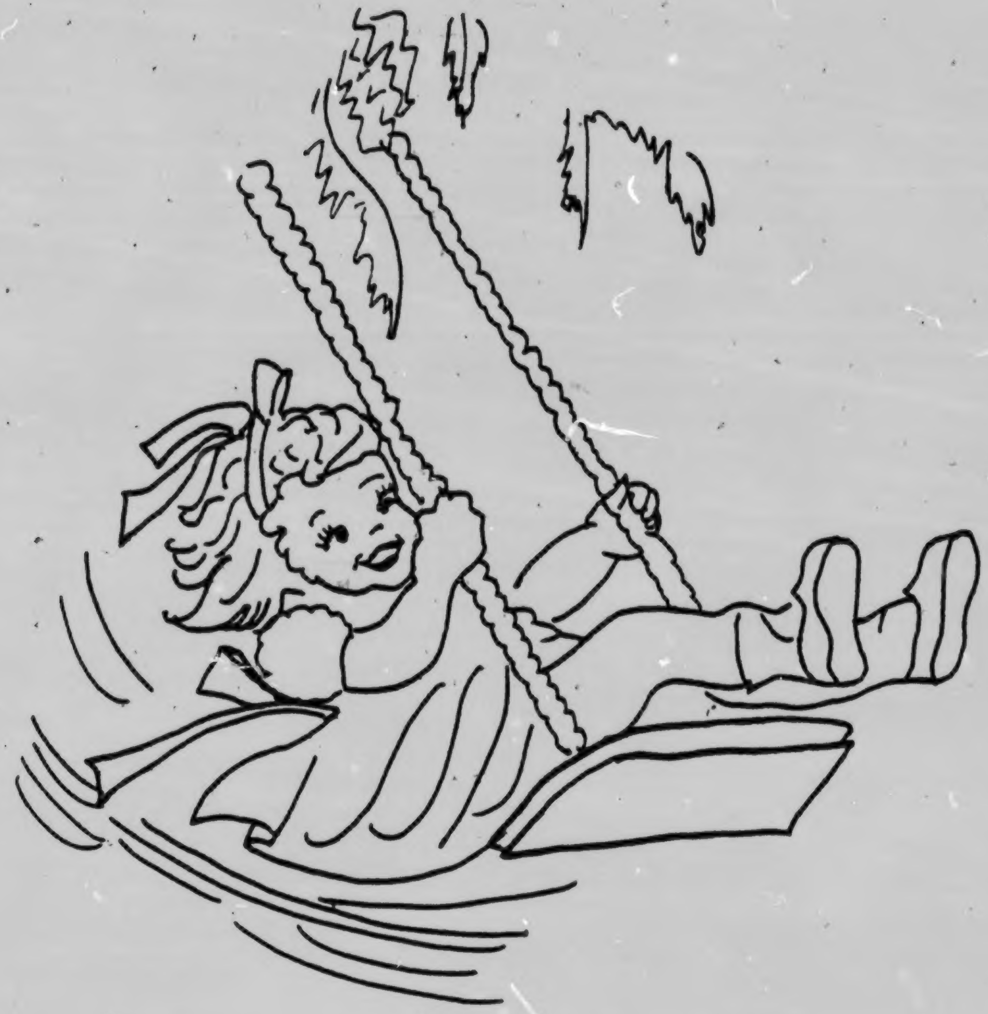
SLEEPING



EXERCISING IN FRESH AIR



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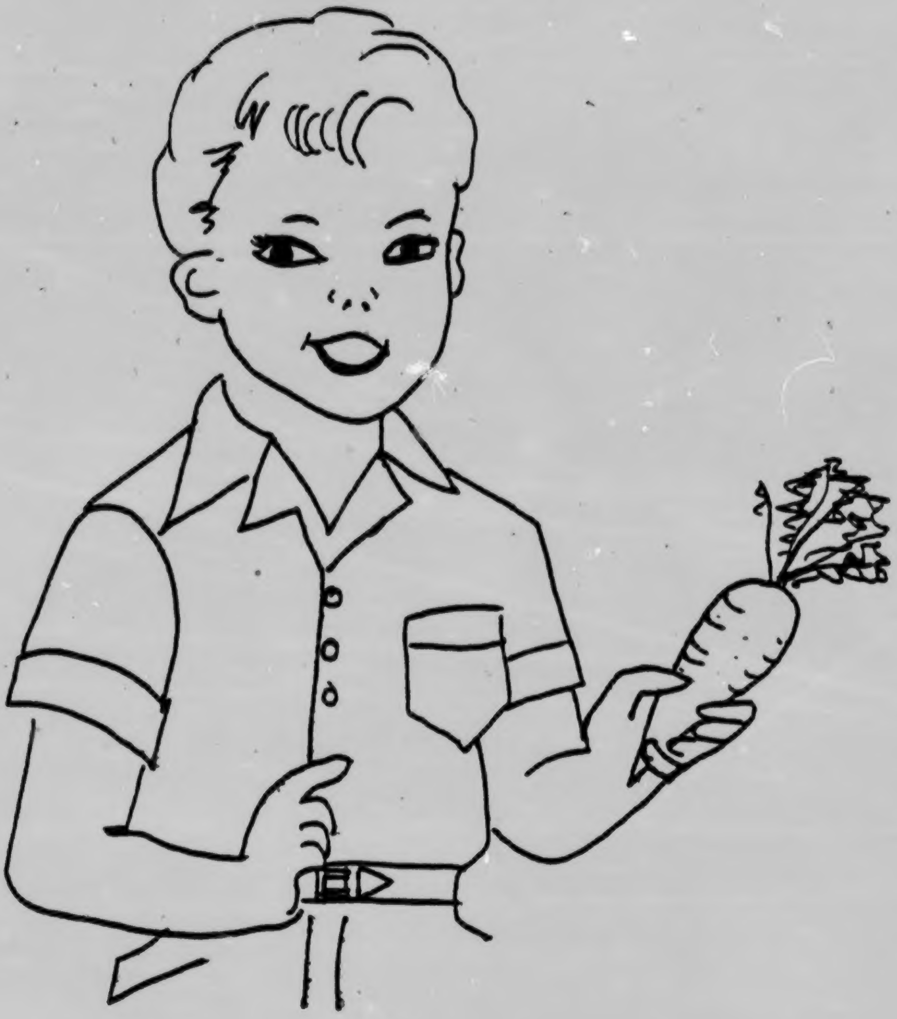
EATING PROPER FOODS



Concept A, C

Kindergarten
Subject Area:
Health
Social Studies

HAPPY-HEALTHY TEETH

4

Behavioral Objectives: The student will understand how to prevent cavities by eating the proper foods, flossing, and brushing.

The student will recognize the dentist/dental hygeinist as people who teach about keeping teeth healthy and free from cavities.

Process Objectives: Gathering information, relating points to each other; recognizing cause and effect relationships.

Teacher Information: Dental caries are one of the most prevalent diseases among children. As many as 98% of school-aged children have at least one cavity. Children will learn that they are the primary care-takers of their teeth. Although the dentist and the dental hygeinist can help them in caring for their teeth, it is ultimately the children who make the difference in preventing cavities.

Materials:

Food Pictures:
Fresh fruit and vegetables
Cake cookies bread
Candy Milk Meat
Marshmallows

Picture of
"Sticky" and "Non-Sticky" (attached)

Purchase: Dental Floss and Mirror
Marshmallows and Apples

Vocabulary: cavities, dental, floss, brush, sticky, sweet, crisp, crunchy

ACTIVITY

Motivation:

Show the students pictures of sticky foods (cake, candy, cookies, marshmallows) and non-sticky foods (fresh fruits, vegetables, bread, meat, milk). Ask them to name the foods that will stick to their teeth.

Read the Sticky Poem and the Non-Sticky Poem. (Hold up picture of "Sticky" and "Non-Sticky")

Sticky is my name,
Cavities is my game.
I love to stick to you teeth
and rot the enamel from underneath.

I'm gooey, and sweet, and people think I'm a treat
But if you want to keep you teeth, I'm better not to eat.

Non-sticky is my name
Healthy teeth is my game.
I'm crisp and crunchy
I'm a mighty fine munchy.

For Happy and healthy teeth you'd be smart
To give me, Non-Sticky, a place in your heart.
I'm fruits and vegetables and I help your bite
For cavity-free teeth I am so right.

Development:

1. Conduct the following experiment. The teacher gives the instructions as the students conduct the experiment.
   - a. Have each student eat bite of apple and and one bite of marshmallow. (Apple first)
   - b. Which food sticks to your teeth? Look in the mirror and feel your teeth with your tongue. (marshmallows)
   - c. Which does not stick to your teeth? (apple)
   - d. What other kinds of foods do you think would stick? (caramels, frosted cakes, cookies)
   - e. What other foods can you think of that won't stick to your teeth? (carrots, other vegetables, fruits nuts, meat, eggs, milk, bread)

   Have the students rinse their mouth out with water and spit carefully into a small container or the running water in the sink. Then floss the remainder of the candy out of the teeth.

Evaluation:

Ask the students to name sticky foods that can cause cavities and non-sticky foods that keep teeth healthy.

Additional Activities:

1. A Toothful Story: Read the "Toothful story" and sing the song Cut the characters apart before the story begins.
2. Make a bulletin board of food pictures collected from magazines or drawn by the children to show healthy tooth snacks and snacks that may cause tooth decay.
3. Invite a dental hygeinst to class to demonstrate the proper way to floss and brush.
4. Have the children plan a "Healthy Tooth Party" at which fresh fruits and vegetables and other "non-sticky" foods will be served.

Additional Resources:

Dental Health Teaching Kit: available from Dental Auxiliary, San Mateo Health Dept.

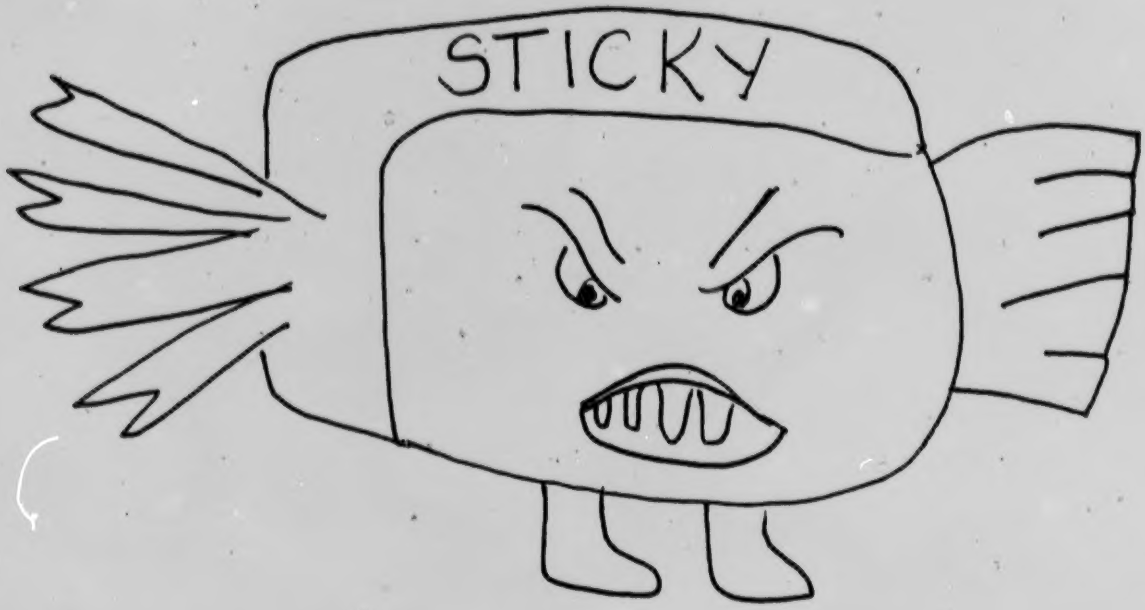
Filmstrips:
"Your Mouth Speaking", Walt Disney Ed. Media Co., 1975 (a 7-part sound filmstrip series which covers all aspects of dental health). Available from IMC - SFS 611 Cass

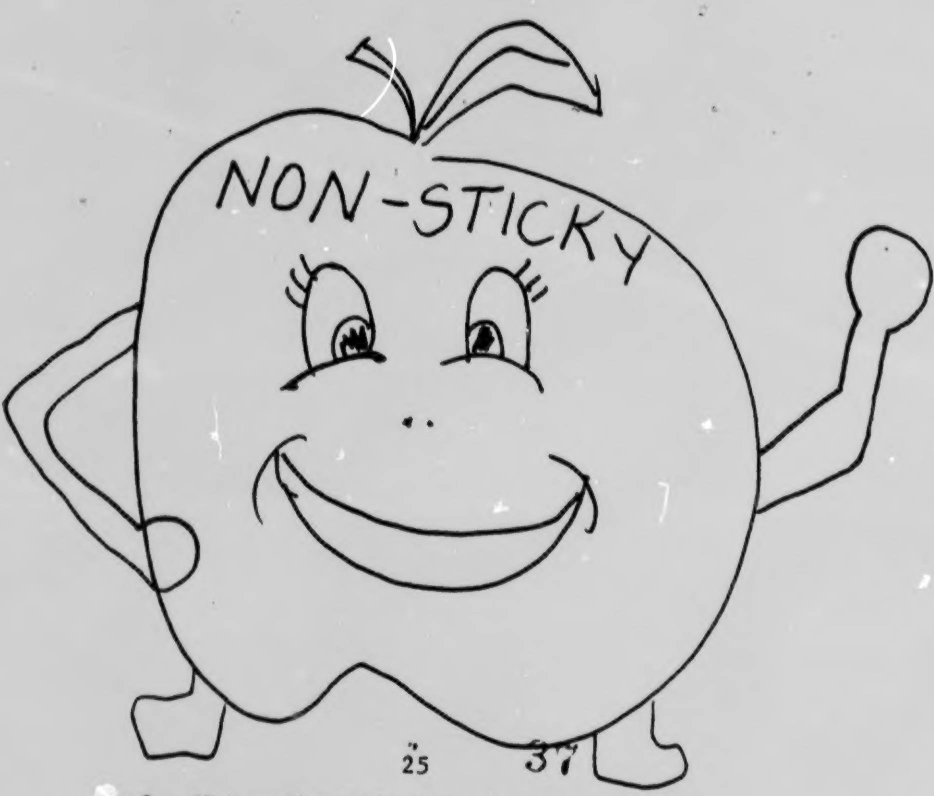
Books:
Bedtime for Frances, Hoban R. New York, Harper and Row, Pub. 1960. (Frances can't sleep so she gets up to brush her teeth.)

Albert's Toothache, Williams, Barbara. New York: E.P. Dutton, Inc., 1974. (A story of how a turtle can have a toothache.)

Films: Available from County IMC

Teeth Are to Keep, 1950, color, 21 minutes. Order film #0580 Animated drawings show the four essentials of good teeth care--eat proper foods, avoid sweets, brush teeth after every meal and visit the dentist twice a year. Recommended for grades K-3, although may be a bit old-fashioned for today's sophisticated five-year olds.





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(Flannel board pictures optional: introduce each where name is underscored)

A TOOTHFUL STORY

Charlie was a happy tooth who always did what his mother told him. One of his mother's rules was never to talk to strangers, but to be friendly and happy with those you know.

One day Charlie tooth went out to play. While he was playing, who should come by but Mr. Sweets, a stranger to Charlie. Mr. Sweets started talking to Charlie and wanted to be his friend. But Charlie remembered what his mother told him about strangers, so he told Mr. Sweets he couldn't talk to him. "Go away, please. My mother told me never to talk to strangers," Charlie said.

Mr. Sweets got mad when he heard Charlie tell him to go away. "I'll get even," said Mr. Sweets. He went to get some of his best friends. First he saw Susie Sucker. Charlie had met Susie before at a party. She was not a stranger so when Susie asked Charlie to play he said to himself "Susie Sucker is not a stranger. I can play with her". So they swang and played.

Then along came Patty Pop and Gregory Gum. Mr. Sweets sent them to play with Charlie, too. So for a long time Charlie Tooth played with Susie Sucker, Patty Pop, and Gregory Gum.

One morning when Charlie woke up, he didn't feel the same (Use SAD TOOTH). He ached all over. "OooOwOhOoo", he groaned. His mother heard him and called the tooth doctors, Doctor Brush and Doctor Paste. "Get here right away, please. Charlie is sick!" she said.

When the doctors arrived (Put up Tooth Brush and Tooth Paste) they took one look at Charlie and they knew right away what was wrong. "A good brushing is what you need," said the doctors. So Dr. Brush and Dr. Paste gave Charlie the best brushing he had ever had. (Put up Happy Tooth)

"Now, Charlie," said Dr. Brush, "this isn't going to be enough to keep you well. You have been playing with those friends of Mr. Sweets, haven't you?"

"Yes," said Charlie. "But I told Mr. Sweets to go away," he added.

"Charlie," said Dr. Paste, "Mr. Sweets and all of his friends didn't really want to be your friends. They just pretended. If you want to be a happy, healthy tooth, you must't play with Mr. Sweets or his friends."

"But..but.., if I don't play with Sally Sucker, Gregory Gum, and Patty Pop, I won't have any friends to play with," said Charlie.

Dr. Brush and Dr. Paste said, "There are lots of friends you can play with. Better friends. If you play with them you will be a healthy, happy tooth. Let us introduce them to you."

First came Freddie Fruit. Then came Virginia Vegetable. Chester Cheese was next. They were all smiling and seemed friendly. Charlie was anxious to play with his new friends.

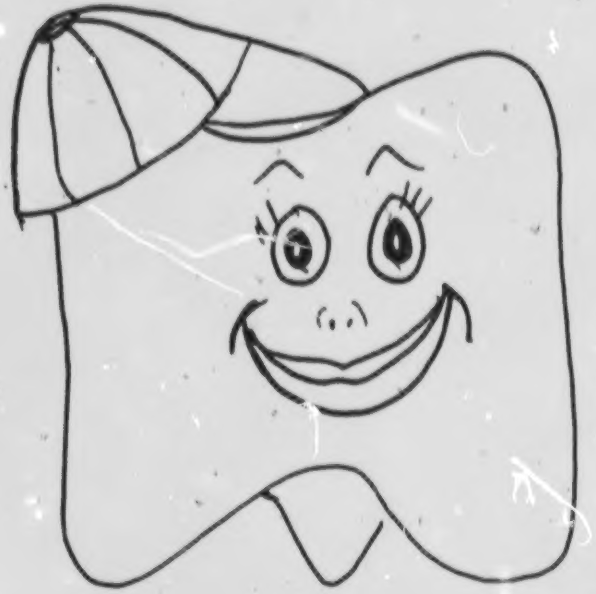
"Wait," said Dr. Pasta, "You haven't met one of the best friends teeth can have. I would like you to meet Marvin Milk" Marvin Milk was really strong and healthy looking. Charlie knew he would like Marvin Milk a lot.

"Thank you, Dr. Paste and Dr. Brush, for introducing me to these new friends," said Cahrlie.

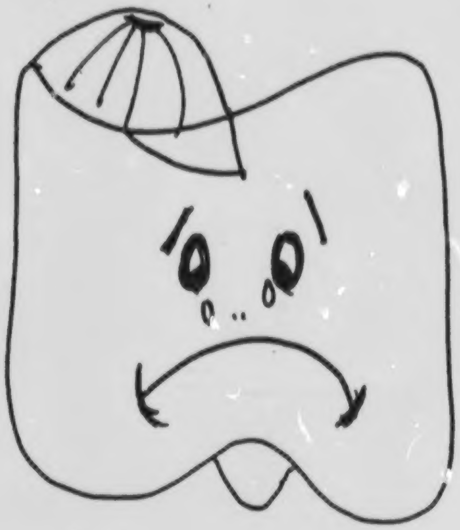
Then all his new frinds sang Charlie a song to the tune of "Mary Had a Little Lamb" that goes like this:

CHARLIE IS A HAPPY TOOTH, HAPPY TOOTH, HAPPY TOOTH,
CHARLIE IS A HAPPY TOOTH, HE WANTS TO STAY THAT WAY.
KEEP YOUR TEETH HEALTHY TOO, HEALTHY TOO, HEALTHY TOO,
KEEP YOUR TEETH HEALTHY TOO, JUST KILE CAHRLIE TOOTH.

(Story adapted from "Early Years" magazine, February, 1975)
Illustrations inspired by staff of Noble School, Berryessa School District)



Happy Charlie Tooth



Sad Charlie Tooth

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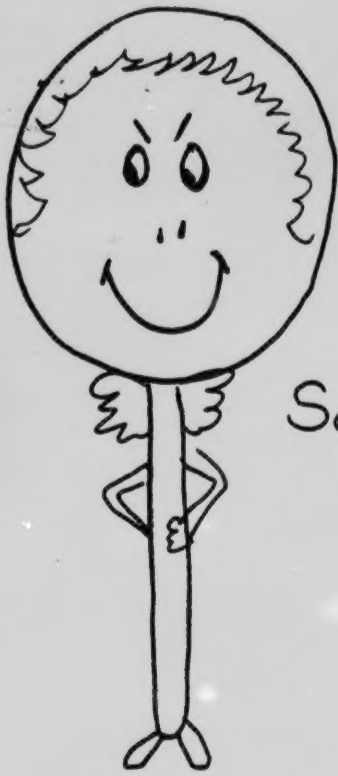
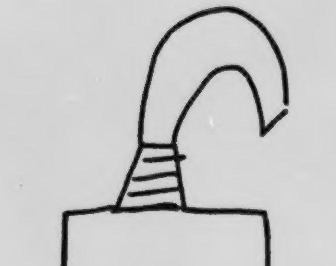
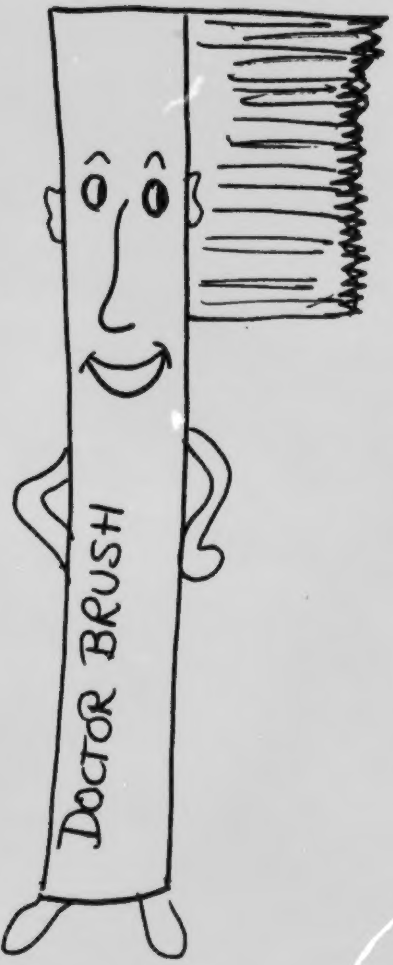


Sally Sucker


Doctor
Paste


DOCTOR BRUSH

41

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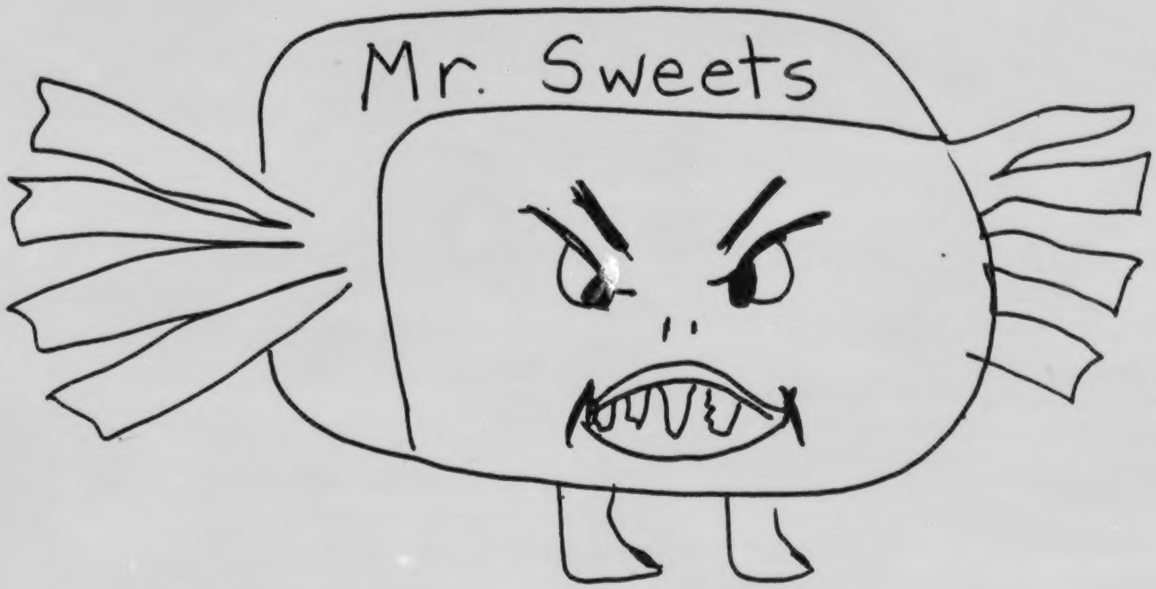
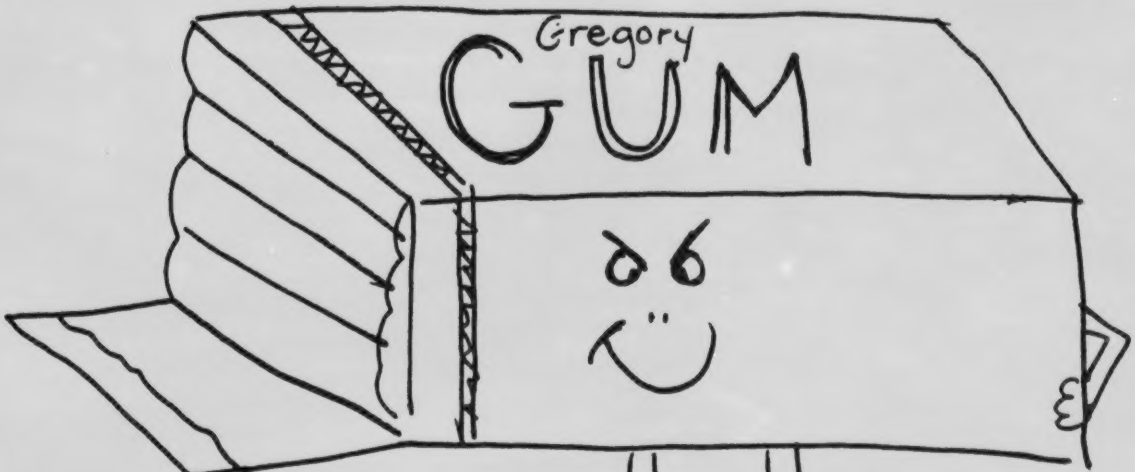
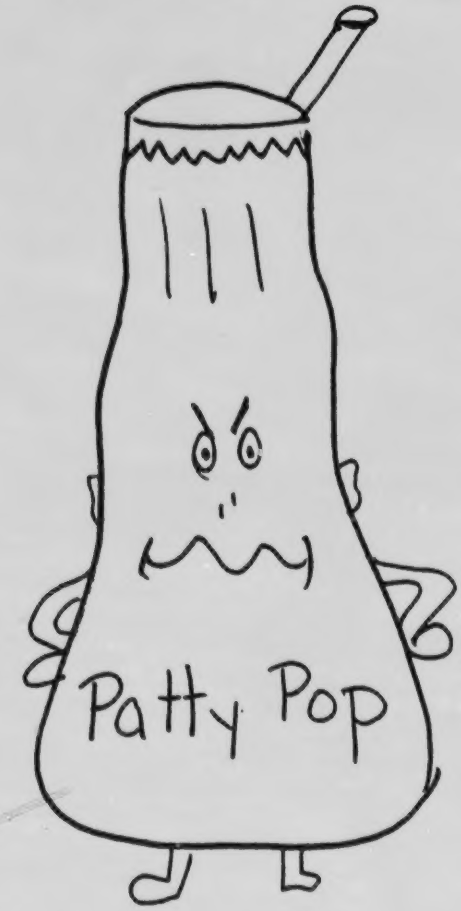
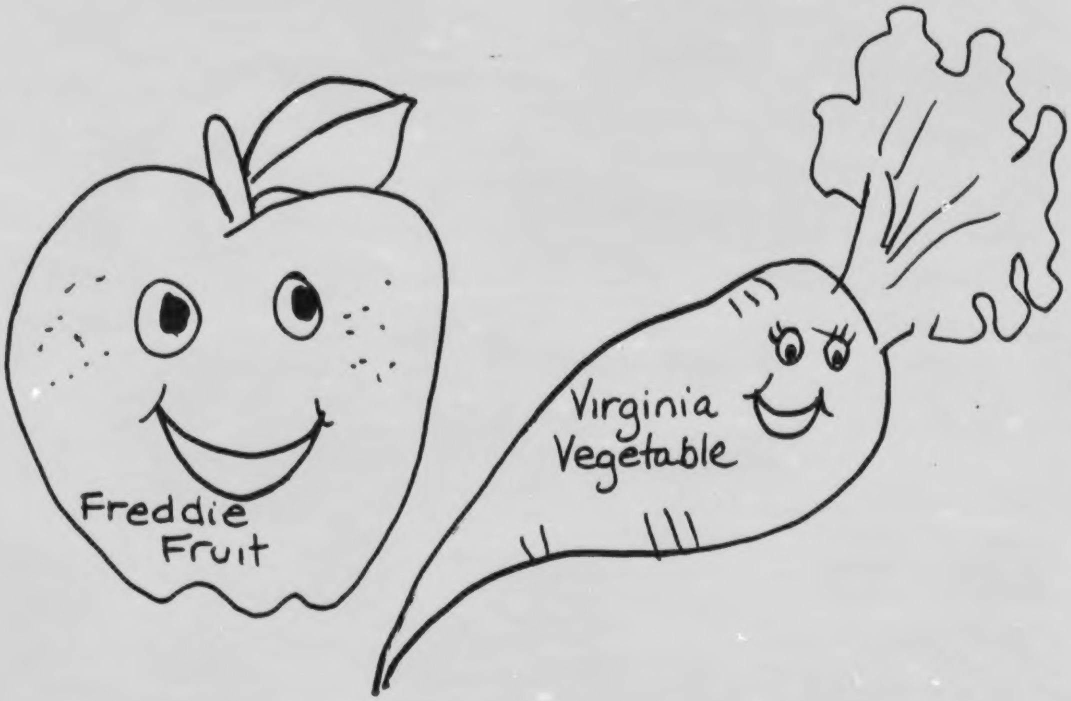
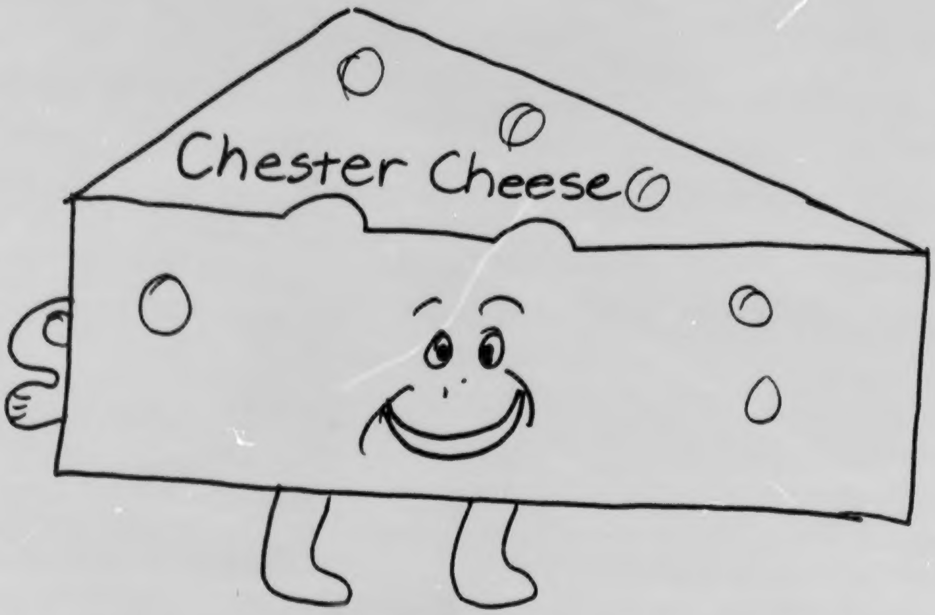
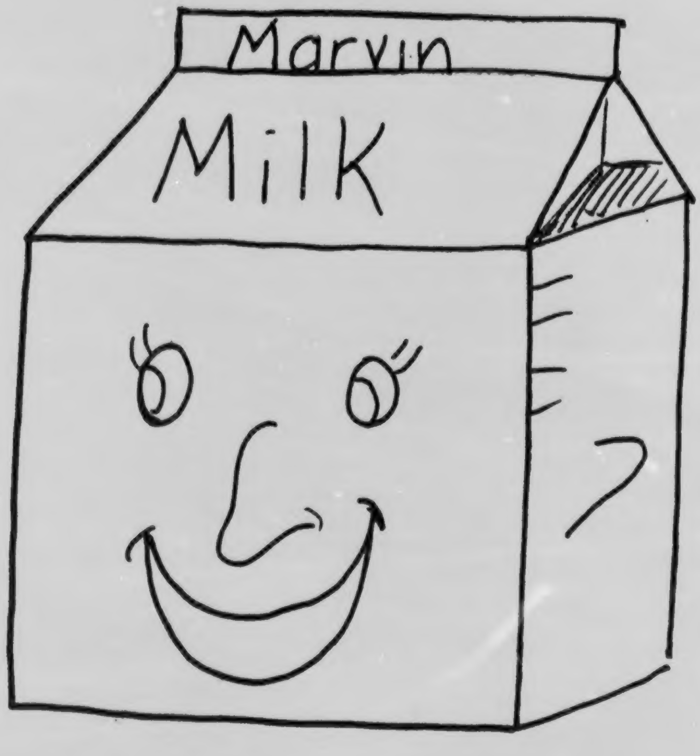

Mr. Sweets


Gregory
GUM


Patty Pop


Freddie Fruit
Virginia Vegetable


Chester Cheese


Marvin
Milk

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DEAR PARENTS,

WE ARE LEARNING ABOUT HEALTHY SNACKS AS PART OF OUR GOOD NUTRITION LESSONS. WE WILL MAKE AN EFFORT TO SERVE AND EAT SNACKS THAT MAKE US HEALTHY.

FROM TIME TO TIME WE WILL NEED SOME SPECIAL FOODS TO MAKE OUR OWN SNACKS FROM RECIPES HERE AT SCHOOL. MAY I NOTIFY YOU OF OUR NEEDS THROUGHOUT THE YEAR? IF YOU ARE ABLE TO HELP WITH A DONATION OF A FOOD ITEM OR YOUR TIME WE WOULD BE MOST APPRECIATIVE.

THE SNACKS WE WILL BE EATING WILL BE HIGH IN VITAMINS, MINERALS, AND PROTEIN AND LOW IN REFINED SUGAR AND FAT.

THANK YOU,

HEALTHY SNACK LIST FOR HEALTHY TEETH

This guide will help you select food snacks which are good for your children's teeth as well as their general health. Look for the foods which do not have refined sugar or starch but which have nutritional value, especially vitamins A and C and protein.

FRESH FRUITS such as	Apples	Grapefruit	Peaches
	Oranges	Grapes	Pineapple
	Tangerines	Plums	Cantaloupe
	Tangelos	Pears	Berries
FRESH VEGETABLES such as	Carrots	Cucumbers	Radishes
	Cauliflower	Green Peppers	Tomatoes
	Celery	Peas	Turnips

MEAT or MEAT SUBSTITUTES such as

Lunch Meats (fresh or canned; deviled ham, chicken, turkey, Vienna sausage)

Fish (fresh or canned, tuna, sardines)

Eggs (hardboiled or deviled)

Nuts, peanut butter (without added sugar)

MILK or MILK PRODUCTS such as

Cheese
Cottage cheese
Yogurt (plain or with fresh fruit added)
Kefir(plain)

THIRST QUENCHERS such as

Fruit Juices (canned, fresh, frozen with no sugar added - avoid fruit drinks)
Tomato Juice
V-8
Cold water (sparkly is fizzy and fun)

CAUTION: Sweet and sticky foods should not be served as between-meal snacks. Examples of such foods include: candy, cake, cookies, supcakes, pie, jelly, jam, soft drinks, fruit punch or fruit drinks, coffee with sugar, and tea with sugar.

THE FOLLOWING FOODS SHOULD BE SAVED FOR MEALTIMES BECAUSE THEY STICK TO THE TEETH. (Because they contain sugar or starch and remain on the teeth they can start the tooth decay process. By eating them at mealtime, the food is partially removed by chewing other foods and by brushing after each meal)

- Bananas
- Bread (except 100% whole wheat)
- Canned fruit packed in heavy syrup
- Chocolate milk
- Crackers
- Dried fruits, such as raisins, figs, prunes, and dates
- Ice cream
- Peanut butter
- Sugar-coated cereals

WE URGE THAT EACH CHILD:

- eat non-decay producing foods
- be taught to floss and brush teeth
- have regular dental checkups beginning at 2½ to 3 years

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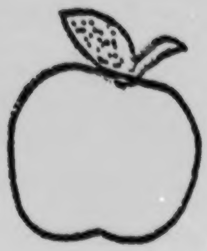
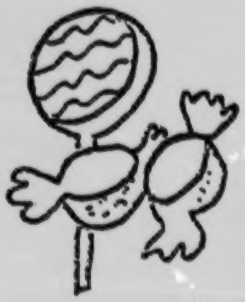
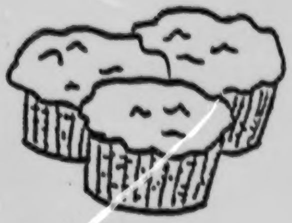
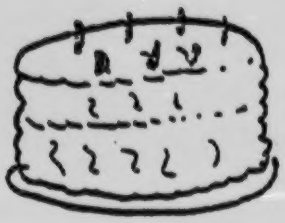
NAME________________________

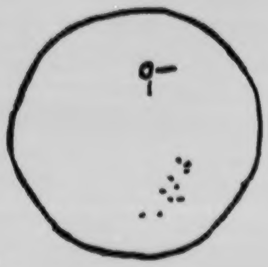
CIRCLE THE HEALTHY SNACKS

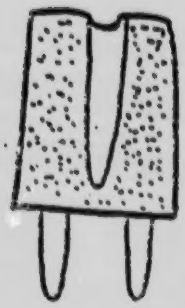


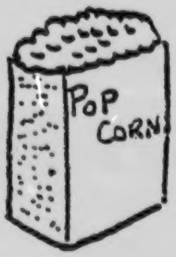


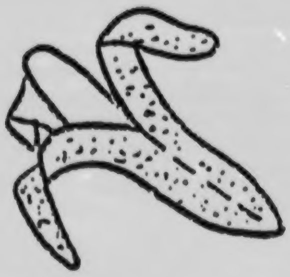


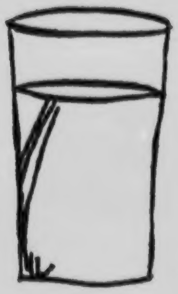












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Concept E

Kindergarten
Subject Area: Health

LET'S KEEP FOOD CLEAN

Behavioral Objective: The student will identify two ways he/she can help keep food clean and safe to eat (washing, proper storage).

Process Objective: Understanding the factors that affect social behavior, skill in the process of observing, inferring, valuing.

Teacher Information: Food sanitation is introduced to help the young child understand how he/she can properly take care of foods. Food must be clean (free of dirt) and sanitary (free of germs) to be safe. Proper storage and personal cleanliness are the two factors emphasized here. The lesson can be spread over 2 days.

Materials: Food samples: Soap, paper towels and water
1. raw celery
2. one food that does not need to be refrigerated (crackers)
3. one food that needs refrigeration (milk)

Optional: Refrigerator shelf computer board
miscellaneous pictures

Vocabulary: clean, safe, cupboard, refrigerator, cold, covered

ACTIVITY

Motivation:

Ask students to recall the reason for washing hands before eating. (To remove germs and dirt.) Ask them to name anything else that should be done before we eat. (food, dishes)

Ask students to name a food they had at their last meal and tell if it should be washed or not. Explain to class that they will learn how to keep dirt and germs off of food, too.

Development:

A. Cleanliness
   1. Demonstrate proper hand washing using water, soap, and friction all the way up to the wrist. Also demonstrate the way to wash celery and utensils.
   2. Supervise children as they wash hands and celery. Supervise children's preparation of the food for eating and the washing of the utensils. As children wash the food and utensils ask what they are doing and why.
   3. Count out taste samples of the celery and ask for descriptive words or phrases of the way the celery tastes, looks, smells, and feels, and sounds.

B. Storage
   1. Show the children the cracker and the milk and discuss how they should be put away to keep germs and bugs out. (Milk in refrigerator with the

lid closed; crackers in the cupboard tightly covered.)

2. Give children pictures of food to sort into "Wash or Not" foods. Pictures may also be divided into "Refrigerator" or Cupboard" foods.
3. "Refrigerator-cupboard" computer board is optional for reinforcement.

Evaluation

Ask children to describe how they would make sure that fruit is safe to eat and where they should put milk and crackers away.

Kindergarten

Subject Area: Social Studies

Small Groups
(4-6 students at a time)

GOOD MANNERS

Behavioral Objective: The students will learn some good manners to use when eating.

Process Objectives: Skill in communicating effectively in groups; self control in interpersonal situations; Understanding the factors that affect social behavior.

Teacher Information: Because eating is usually done in a social situation, practicing good manners while eating helps ensure that this kind of social situation will be an enjoyable experience for all concerned.

Good manners are taught as a social skill. This is a part of the child's social development. Teaching the child what to eat and how to eat provides a necessary combination of skill and application of the eating process.

Because there are too many good manners to cover in one unit, only basic good manners will be covered:

(a) food courtesy words
(b) appropriate amounts of food to serve yourself
(c) proper use of utensils and napkins

(Any other manners which the teacher observes need attention should also be included.)

- -

Materials:
Paper plate with construction paper orange sections- one section/child
Paper "place mat" - one per child
Plastic knife, fork and spoon and napkin - one per child (6 sets)
A snack that the children can eat to demonstrate manners.
Proper table setting pattern attached.

- -

Vocabulary: please, thank you, you are welcome, courtesy, manners, knife, fork, spoon and napkin

ACTIVITY

Motivation:

Before beginning the class activities to teach good eating manners, find out what the needs of the children are by doing the following with groups of 6 students at a time.

(A) Invite the children to sit at a table. Place the paper plate of "orange sections" in front of one child. To the child at the opposite side of the table say "Would you show your good manners by asking for something on the table?" (First child says "please" and "thank you". Then second child asks the first child, etc.

(B) Give each child a knife, fork, spoon, and napkin. Ask the children to "set" the place in front of him/her (observe placement of utensils and napkins)

(C) Ask the children "Which of the things in front of you would you use first and how would you use it?" (napkin in lap)

(D) Ask each child to imagine that on the table is a plate with some meat on it (Brown paper circles can be passed out if desired). Say, "Use your good manners to eat the meat." (Observe use of forks and knives)

(E) Now pretend that you have a bowl of ice cream in front of you. Show me how you would use good manners in eating it. (Observe use of spoon)

(F) Now pretend you have finished eating. Show me good manners you should use before you leave the table. (Wipe mouth with napkin, put napkin on the table. Ask to be excused)

Development:

1. Role play the passing of a food (Use real, plastic or pictures of food) The first child asks for the food by saying "Please pass the ________" and responds with "Thank you" when the food is passed. The child who passes the food will respond with "You are welcome".

   Repeat this role playing with several different foods until each child has had at least two roles to play.

2. Happy Face, Frowny Face: Show the children how a "happy face" looks when children use good manners (teachers smiles broadly) and how a frowny face looks when children use bad manners (Teacher frowns).

   Have all the children make a "Happy Face" and a "Frowny Face". The happy face means that good manners are used, the frowny face means bad manners have been used.

   Read the following story to the children and have them demonstrate their knowledge of good manners regarding serving food by smiling when a good manner is used and frowning when a bad manner is used.

THE STORY OF RODNEY RACOON

Rodney Racoon went to school one day with a bag of snacks for all the boy and girl racoons in the class. He took nuts and orange juice.

Rodney put the snacks on the table and the boy and girl racoons served themselves at snack time.

Roberta Racoon took only a small pawful of nuts because she wanted there to be enough for everyone. Roberta used ______ (good) manners.

Rickey Racoon poured so much juice in his glass that it spilled all over the table when he tried to take a drink. Rodney used ________(bad) manners.

Rosie Racoon washed her paws very carefully before it was her turn to take a snack, Rosie used _____(good) manners.

Randi Racoon sipped her juice very carefully and swallowed each sip completely before taking another sip. Randi Racoon never gulped her juice. Randi used _______(good) manners.

Rodney Racoon watched the other racoon boys and girls enjoying thier snacks. When it was his turn he took just the right amount of nuts and chewed them slowly with his mouth closed. Then he poured some orange juice into the cup so it didn't spill when he drank it. Rodney Racoon always used ________(good) manners.

Their teacher said she was so happy that the boys and girl racoons brought snacks to school to share with the others. She said she was especially proud when the racoon children used good manners.

All the racoons said they wanted to learn more good manners to use at home. With that, they all picked their napkins off their laps, wiped their mouths, and said, "THANK YOU, RODNEY," to which Rodney replied "YOU ARE VERY WELCOME!"

3. WHICH UTENSIL DO YOU USE? Children will respond to teacher statements(below) by holding up the proper utensil (knife, fork, spoon) and showing how to use it to demonstrate an understanding of good manners. Repeat each several times so each child gets an opportunity to respond. (Some are finger foods)

I eat my soup with a..... (spoon)
I eat my ice cream with a ......(spoon)
I butter my bread with a .....(knife)
I eat my meat with a ..... (knife and fork; child simulates cutting meat)
I eat my peas with a ..... (fork)
I eat a hot dog in a bun with my ...... (fingers)
I eat a baked potato with a.... (fork)
I eat a bowl of peaches with a .....(spoon)

(Add additional examples as desired)

4. Given the opportunity to prepare and serve a simple snack, the students will teach the teacher the good manners used in eating and serving the snack.

Snack Ideas: Peanut butter on crackers
Milk

Evaluation: The last activity in Development may be used as an evaluation of the degree to which students have learned good manners.

Optional evaluation technique is to repeat the preassessment procedure.

Additional Activities

1. Read the book Gustav the Gourmet Giant and ask children to tell how the giant should have eaten to use good manners.
2. Read the book Manners Can Be Fun by Leaf Munroe. Show the pictures to the class and have them describe the good and bad manners shown.

Additional Resources:

Books: The Very Hungry Caterpillar by Eric Carle, Collins World.

The caterpillar eats too much.

Gustav the Gourmet Giant by Gaeddert, Lou Ann. New York: Dial, 1976.

Full details of outrageous gluttony of a giant.

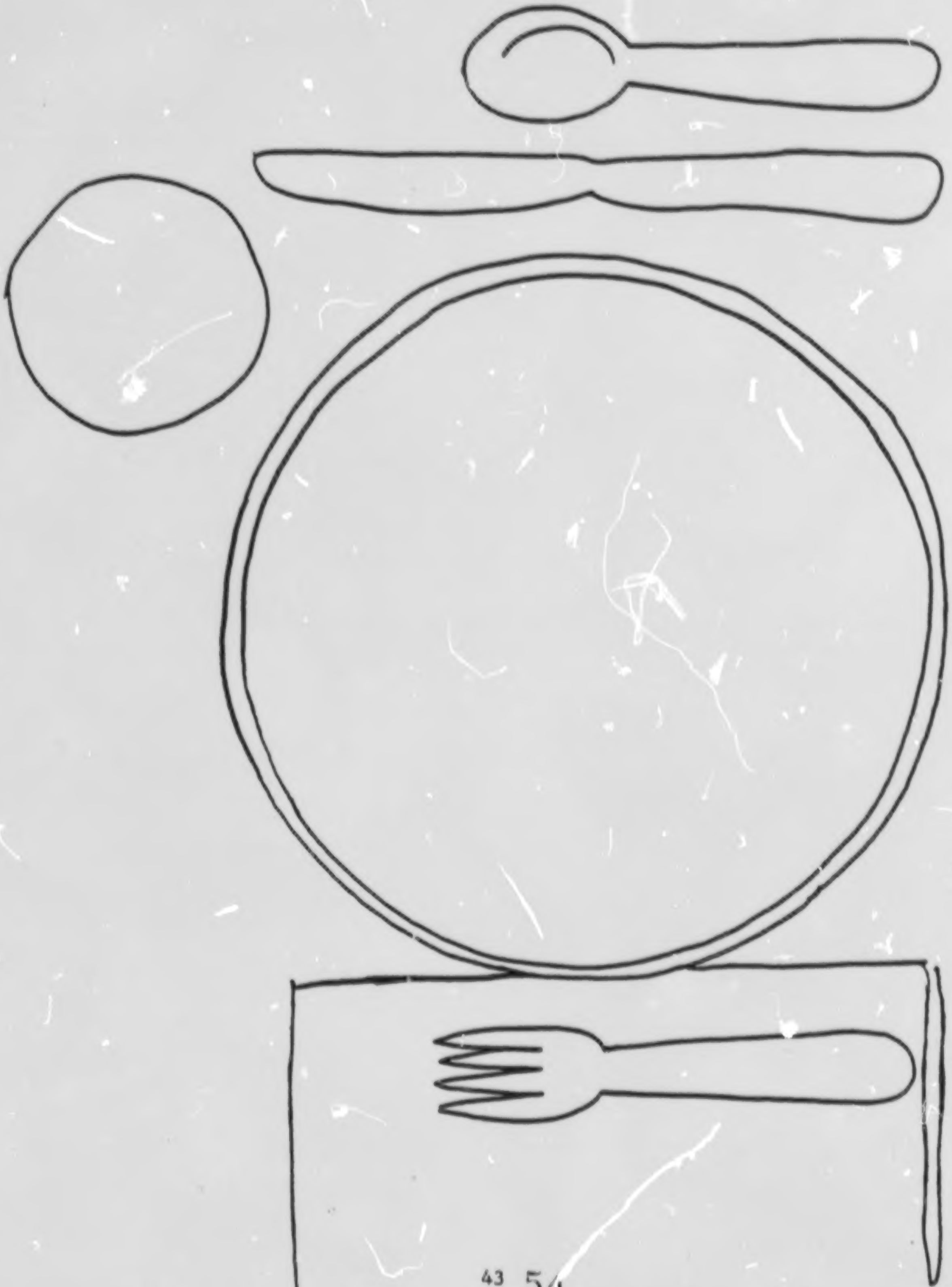
The Man Who Didn't Wash His Dishes, by Krasilovsky, P., New York: Scholastic Book Services.

Use to discuss that dishes have to be washed and one should help at mealtime.

(Available as a Resource Kit from Distric IMC)

Manners Can Be Fun by Munro Leaf.

PROPER TABLE SETTING PATTERN



San Mateo City Schools, CA Dept. of Ed.

Concept D

Kindergarten
Subject Area: Health

HOW DO WE WASTE FOOD?

Behavioral Objective: The student will identify one way to avoid food waste as "taking only what you can eat".

Process Objective: Relating points to each other; valuing; understanding alternative behaviors.

Teacher Information: Obesity has reached epidemic proportions in this country. The problem can begin in childhood. Even though children are growing, they cannot eat adult-sized portions. By forcing a child to eat all the food on the plate, a life-long problem may be ingrained. Healthy children are usually reliable judges of how much, but not what, they need to eat.

Children will be able to see the problem of overating through children's stories and portion size games. They will be able to identify adult and child-sized portions and to see the reason for differences in the amounts of foods people eat based on size.

Materials: a version of "Goldilocks and the Three Bears"
Pictures of appropriate and inappropriate serving sizes of foods
Ingredients of snack - Class Choice

Vocabulary: size, overeat

ACTIVITY

Motivation:

Read the story of "Goldilocks and the Three Bears". (This fairy tale lends itself to the concept that larger bodies can consume more without overeating).

After listening to the story, have the children answer these questions:
- a. Who had the biggest bowl of porridge? (Father Bear)
- b. Who is the biggest member of the Bear Family? (Father Bear)
- c. Who had the medium-sized bowl of porridge? (Mother Bear)
- d. Who had the smallest bowl of porridge? (Baby Bear)
- e. Who is the smallest member of the Bear Family? (Baby Bear)
- f. Which bowl did Goldilocks like best? (Baby Bear's)
- g. Is Goldilocks the same size as Baby Bear? (Yes, about the same)

Development:

1. Place the pictures of foods on a table with paper plates. In small groups have the children select serving sized that are "just right" for him/her.

2. Prepare a snack for the class and have each child serve him/herself. Tell the children they are to take only what they think they can eat, but that if they want more and still have "room" they can get seconds.

   As the children are eating their snack discuss the reasons for "only taking" what you can eat. (To prevent wasting food by not eating it all)

Evaluation:

Ask the children to tell how each of them can make sure no food is thrown away from their plate. (Acceptable answers: take only what you can eat; don't eat too much)

Additional Activities:

1. Read *The Very Hungry Caterpillar* to discuss the problems of eating too much and that we must eat the right foods for us.

2. Read the story of *Yummers*, a pig who goes on a walk to lose weight but is tempted by all the food she sees.

3. Draw a ditto of foods in varying portion sizes. Have each child indicate his/her understanding of the effects of eating too much, too little, and just the right amount by pasting (or drawing) a smiling face under those foods shown in the correct serving size and a sad face under the incorrect serving size.

Additional Resources:

Books: *Eat!* by Paterson, Diane, New York: Dial, 1975.
Story of a picky eater named Martha.

Yummers! by Marshall, James, Houghton, 1973.

Emily Pig goes walking to lose weight but is confronted with irresistible delicacies at every turn.

The Very Hungry Caterpillar, by Eric Carle , World Pub. Co.

Use to discuss the problems of eating too much and that we must eat the right food for us- a leaf for a caterpillar and a variety of food for humans.

Winnie-the-Pooh Meets Gopher, Milne A., Western Publishing Co., Inc., 1972.

Use to discuss eating only until full and the need for a variety of foods, not just sweets which fill us up quickly and leave no room for other foods.

Concept D

Kindergarten
Subject Area: Science

WHAT DO PLANTS NEED TO GROW?

Behavioral Objective: The student will identify water, soil, and sunlight as three things necessary to grow plants in the ground.

Process Objectives: Skill in engaging in the processes of observing, inferring; Acquaintance with the development of scientific methods and major theories.

Teacher Information: This is a plant growing lesson that includes investigation of the parts of seeds. Each child will have an opportunity to see what a plant needs in order to grow, and will see the results on plant growth of inadequate water, sunlight and soil. This activity will necessarily take several weeks and can overlap with other lessons while the plants are growing.

Materials: Plants and Seeds Fold Out Study prints and teacher's guide Child's World, 1972. (Available from Project SNAC)

Activity #1

Planting Materials to grow Radishes.
2 Milk Carton Rootview Boxes - directions attached
Planting soil - 1 bag   Radish Seeds - 1 pkg.
Construction Paper - (for Calendar)

Activity #2

1 pkg. dried Lima Beans - (from grocery store)

Vocabulary: water, soil, sunlight, seed, plants, roots, stems and leaves

ACTIVITY

Preassessment:

Ask students to mark the four things a plant needs so it can grow in the ground. (Acceptable answers: soil, water, sunlight, seeds)

Motivation:

1. Ask the students, "Have you ever planted a seed?" Have several students describe their experience.
2. Use the fold out study prints from Plants and Seeds to discuss different types of seeds.
3. Explain that in class the children will have a chance to grow seeds of their own and to find out how a seed grows.

Development:

1. Radishes: Have a student plant several radish seeds in a Milk Carton Root View Box. Cover with only 1/4 inch soil and water lightly, then place on window sill. Water only when soil seems dry.

To demonstrate what happens when plants do not have water plant one box with radish seeds but do not water.

Make a Growth Chart, by drawing a calendar with large squares. Keep a diary of the plant growth by drawing what the plants look like each day. The seeds must be thinned out after they sprout in order to give each radish enough room to grow. Compare planters for growth after seeds in first box are well up and growing.

2. Exploring seeds: While the radish seeds are growing, have each child examine the three parts of a seed, - the seed coat, the stored food, and the baby plant. To do this, soak a bag of Lima Beans overnight to soften the outer coat. Have each child take one seed on a paper towel and be seated. Begin by asking the children if they have ever seen a baby plant inside a seed before. Discuss what all babies need to grow (food) and ask how the baby plant grows (it gets food from the seed until the seed is planted and then it gets minerals and water from the soil to make its own food). In addition to food, seeds need water, air and warmth from the sun to grow.

   Have each child find the SEED COAT on the outside and peel it off. Under the SEED COAT - (SKIN) - is the STORED FOOD. Then have each child open the two halves of the seed and find the BABY LIMA BEAN inside. Explain that the biggest part of the seed is food that the baby plant needs to start growing.

3. Have each student COLOR ALL THE things needed for a plant to grow. (worksheet attached). If the students need help, make a list of the necessary things on the board for the children to copy

Additional Activities: (to show that some parts of plants store food for growth)

1. Grow a carrot fern: Put a carrot top in a shallow dish of water. Keep the dish by a sunny window for several weeks. Keep the root half- covered. Watch what happens.

2. Grow a sweet potato vine: Insert toothpicks in a sweet potato. Put the sweet potato in a jar. Cover the root half way up with water. Keep the jar by a sunny window for about eight weeks. Watch what happens.

3. Sprout a potato: Put a Russett potato with a heavy skin in a warm, dark place for several weeks. It will send sprouts out, but it will not grow into a potato plant. The sprouts are poisonous.

4. Thirsty birdseed garden:

   2 sponges 2 tsp. birdseed 2 saucers

   1. Sprinkle 1 tsp. birdseed on a dry sponge. Sprinkle the other half on a damp sponge. Keep the wet sponge moist by watering daily.
   2. Compare the two "gardens" for several days. Discuss water as a need for seed growth as well as for the growth of animals and people.

5. Growing Mung Bean Sprouts:

3 TBSP Mung Sprouts
Cheesecloth
Rubber band

1 quart jar
medium to fine seive
1 cereal bowl

1. Rinse the beans in water. Drain
2. Soak the beans in the bowl overnight, in enough water to cover the beans.
3. Next day rinse the beans in seive thoroughly.
4. Place the beans in the jar and cover opening with a double layer of cheesecloth secured with a rubber band.
5. Shake the beans onto the side of the jar into a single layer.
6. Place the jar on its side in a dark, warm place (cabinet).
7. Rinse the beans three times per day using the cheesecloth as a sieve. The bean sprouts will be ready to eat in three to five days when they are 1-1½ inches long.
8. Rinse the bean sprouts well and they are ready to eat.

Discuss what has happened with the seeds. They have sprouted because they have had water and air. However, without being planted in soil they will never grow into bean plants. Sprouting is done in the dark to encourage the roots to grow, which roots do better in the dark. To turn the sprouts green, they can be brought out into the light for one day, but they won't be as fresh and crisp as before.

6. Student worksheet: "What do plants need to grow?"
7. Student worksheet: "Make a list of all the things you need to make me grow"

Resources:

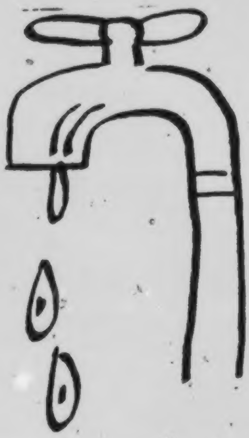
Filmstrip: "Seed Magic: Life story of a Bean" from Plants: How They Live and Grow SFS 581 SET (District IMC)

Books:

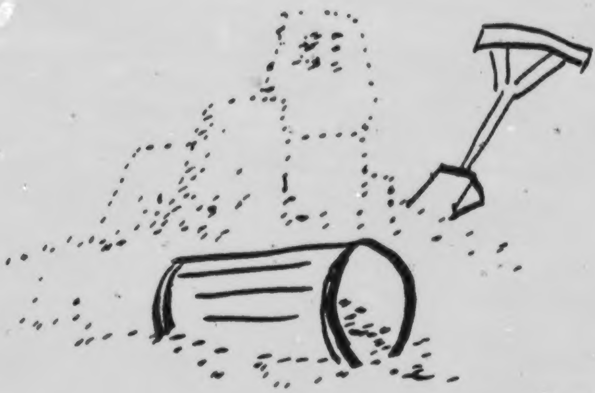
See My Garden Grow
The Plant Sitter
Carrot Seed (See Project SNAC Resource List)
My Plant
A Seed is a Promise

NAME________________________________

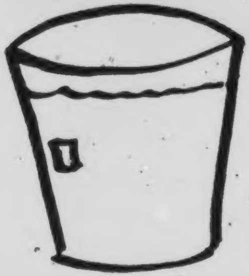
WHAT DO PLANTS NEED TO GROW?



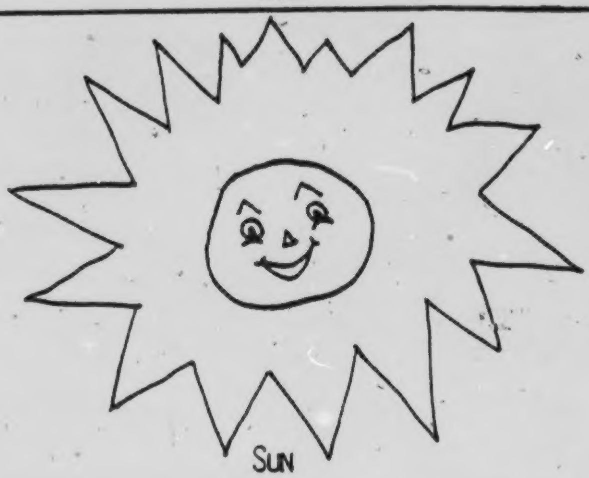
WATER



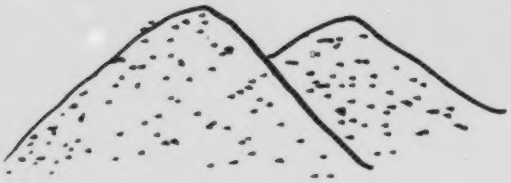
SAND



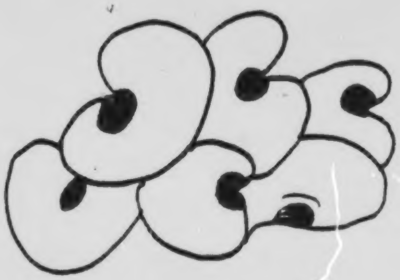
MILK



SUN



SOIL



SEEDS

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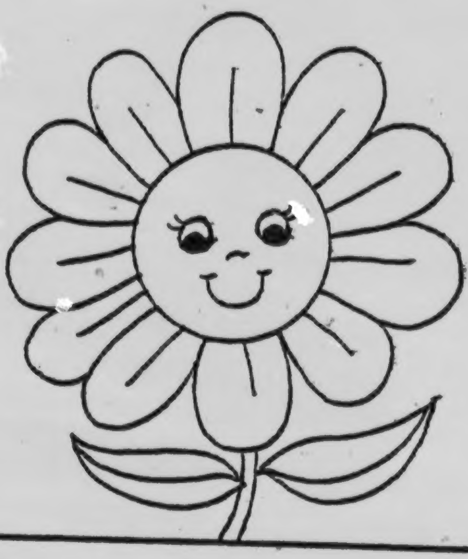
NAME ______________________

MAKE A LIST OF
ALL THINGS YOU
NEED TO MAKE
ME GROW.



San Mateo City Schools, CA Dept. of Ed.

Concept D

Kindergarten
Subject Area: Science

TODAY I ATE A PLANT

Behavioral Objective: The student will be able to name fruits and vegetables which are examples of the parts of a plant; leaf, stalk, root, flower, fruit.

Process Objective: Skill in engaging the processes of observing; inferring, valuing. Knowledge of the unifying concepts of a scientific discipline.

Teacher Information: Children will enjoy the activity which involves eating parts of a plant more than just "eating vegetables." The activity can stretch over as many as 4-5 days, but the tasting party should be planned for one day.

Preparation: Copy the worksheet "Today I Tasted ...." and cut small pictures apart.

- -

Preparation:

Materials:

Make 6 copies of the tree outline.
On 5 copies shade in one plant part only -
(roots, stem/trunk, leaves, flowers, fruits).
You will need to draw the flowers and fruits on the tree.

Color the SIXTH COPY completely.
Label - "A TREE IS A PLANT".

1. Outline of tree and plant part labels.
2. Plastic Fruits and Vegetables - (Peabody Kit or Project SNAC)
3. Fresh fruits and vegetables - sample of each of these; root, stem, flower, leaf, fruit - (see "Today I Tasted ...." worksheet for ideas).
4. Utensils:
   - vegetable brushes
   - vegetable peelers - (2-3)
   - paring knives - (2-3)
   - cutting boards
   - bowls for cut up vegetables or paper plates
5. "Today I Tasted ...." worksheets.

For Optional Dip: Cottage Cheese, onion or avacado
1 pkg. dry salad dressing mix (any type)

- -

Vocabulary: plant, leaf, stalk, root, flower, fruit

ACTIVITY

Motivation:

Introduce the concept "plant". Show, in sequence, the parts of a tree using the diagrams. Then match the words to the pictures with the help of the students. Then show the whole tree. Say "The Whole Tree with all of its parts is called a plant." Can you name some trees and/or plants you have see?"

Leave the composite pictures of the tree (plant) on display and caption the display with "A Tree is A Plant".

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Ask the children to describe parts of plants they recall having eaten. Explain that they will have a chance to eat parts of different plants during this activity.

Pass real or plastic fruits and vegetables around. Name each one and discuss where it grows - above or below the ground. Both the "Versatile Vegetables" poster and "Vegetable-Fruit Poster Cards" show where the vegetables and fruit frow and may be used if desired. (See "Additional Resources").

Development:

TASTING PARTY

Select and purchase an example of each plant part and make arrangements for utensils/equipment to serve as a snack. (Prepare a small sample of each food for each student)- A dip may be prepared from cottage cheese and dry salad dressing mix or a dip, if desired.

Explain that the purpose of the tasting party is to taste parts of a plant. Discuss need for clean hands before preparing food. Name each food as it is passed around in original form for all to touch and smell.

Assign small groups of students to wash and peel, cut, or divide the fruits and vegetables. (A maximum of five examples are recommended to reduce confusion. Once concept of plant parts is learned, other examples can be introduced as follow through activities throughout the year.)

On "Today I tasted" worksheet have students match pictures with correct plant part.

Additional Activities:

1. Save the seeds from several samples of fruit. Allow to dry and mount on tagboard 3"x2" with white glue (dries clear) and draw small picture of the "fruit" on the card. Continue the collection throughout the year.
2. Throughout the year continue to identify each plant food introduced as a leaf, stem, flower, root, or fruit.

Evaluation:

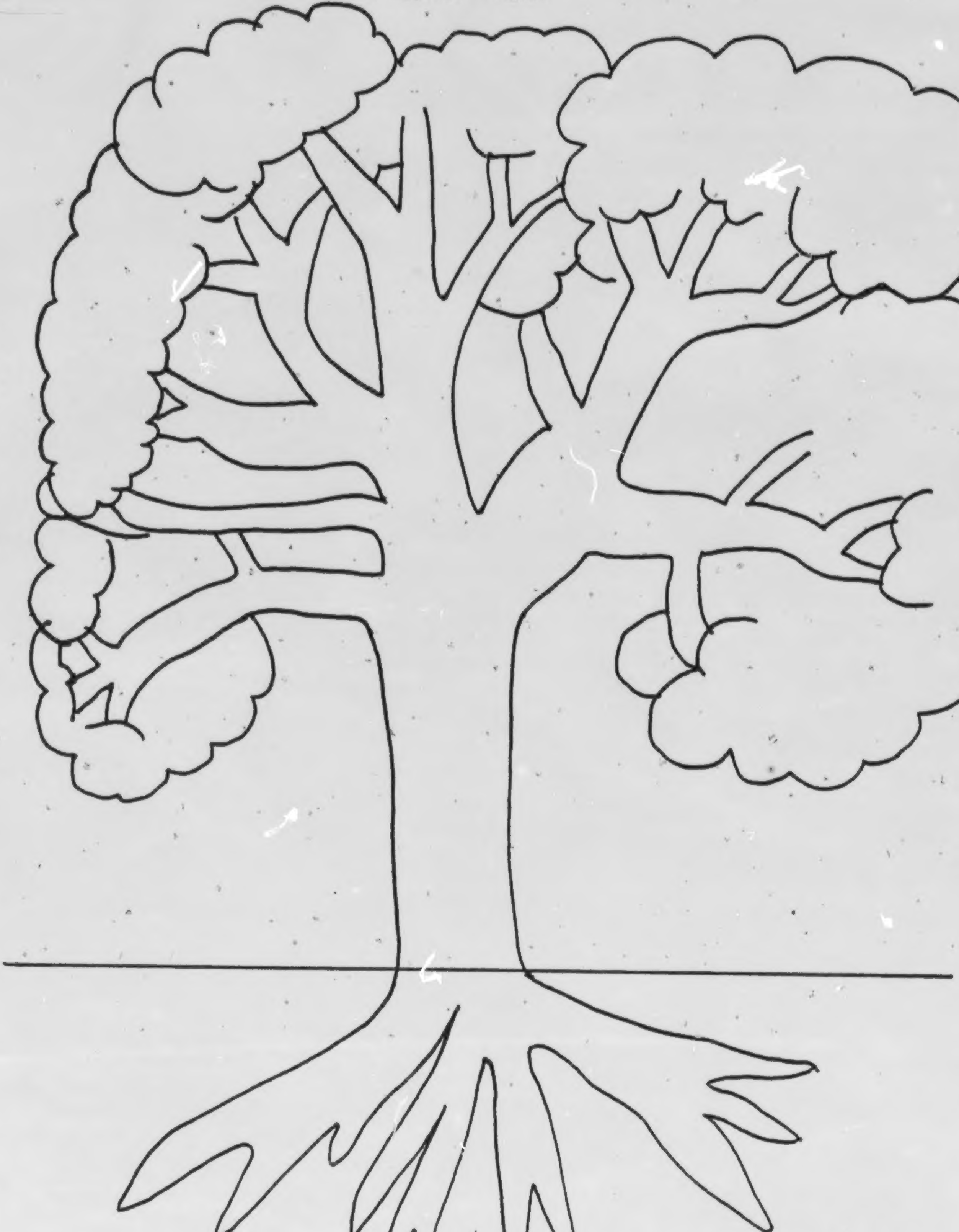
Ask the children to draw or paint the different parts of plants that are used for food; e.g. "Draw a leaf we can eat and tell me the name, etc.".

Additional Resources:

"Vegetable-Fruit Poster Cards" - Milton Bradley

"Versatile Vegetables" Poster - Green Giant Company

A TREE IS A PLANT



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roots

stem

leaves

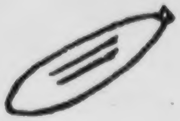
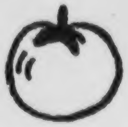
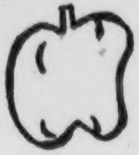
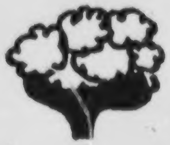
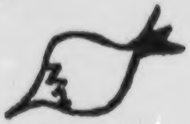
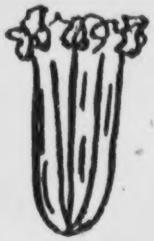
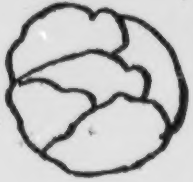
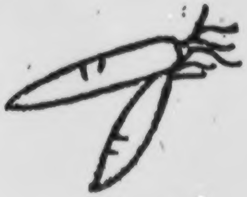
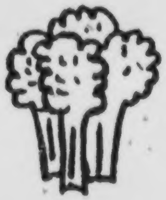
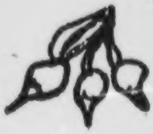
fruit

plant

flower

NAME________________________

TODAY I TASTED

ROOTS	STALKS (STEMS)	LEAVES	FLOWERS	FRUIT
 ZUCCHINI	 TOMATO	 GREEN PEPPER	 CAULIFLOWER	 TURNIP
 CELERY	 CABBAGE	 CARROT	 BROCCOLI	 RADISH

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EDIBLE PLANT PARTS - VEGETABLES

LEAVES	FLOWERS	ROOTS	STEMS	SEEDS
lettuce	broccoli	carrots	broccoli	peas
kale	cauliflower	radishes	celery	string beans
swiss chard	artichoke	beets	asparagus	corn
cabbage		turnips	kohlrabi	pumpkin
spinach		onions	rhubarb (has poisonous leaves)	lima beans
parsley		rutabagas		wax beans
beet greens		parsnips		
dandelion greens		daikon (Japanese)		
		Tubers		
		potatoes		
		sweet potatoes		

INEDIBLE PLANT PARTS - POISONOUS

LEAVES	FLOWERS	ROOTS	STEMS	SEEDS	BERRIES
rhubarb				castor bean	
azalea	azalea			peach	holly
lily of the valley	lily of the valley	lily of the valley	wisteria	plum	
rhododendron	rhododendron				
oleander	oleander	oleander	oleander	oleander	
diffenbachia (dumb cane)					
milkweed			milkweed	milkweed	
philodendron			philodendron	philodendron	

EDIBLE GARDEN FLOWERS

Children are surprised that some garden flowers can be eaten. Caution the children against eating anything that may be poisonous. Do not introduce this concept to children under four years of age.

artichoke
broccoli
cauliflower
geraniums
mustard
nasturiums
rose petals
squash blossoms

Wash all carefully to remove any sprays or pesticides.

San Mateo City Schools, CA Dept. of Ed.

Concept D

Kindergarten
Subject Area: Science

MOOOO! BAAH! OINK! CLUCK!

(We Eat Foods That Come From Animals)

10

Behavioral Objective: The student will match the food from an animal with the animal of its origin.

Process Objectives: Gathering information; classifying

Teacher Information: The United States is a meat-eating nation. Many animal products add to the nutrition and variety of the daily diet of most people. Although vegetarianism is increasing in popularity for economic and ecological reasons, meat and other animal products still provide the major source of protein.

Protein is important for growth, repair and maintenance of the body cells, muscles, and tissues. Meat and other animal products provide fat for energy and warmth, vitamins such as Vitamin A, Vitamin B (Thiamin, Riboflavin, Niacin), and minerals, such as Iron and Phosphorous.

This unit will follow the production of meat from the farm to the grocery store. Many children are already familiar with the meat counter at the grocery store.

- -

Materials: Collage of Cow with matching food pictures (milk, beef, steak)
Collage of Pig with matching food pictures (pork chop, bacon, sausage)
Collage of Chicken with matching food pictures (egg, drumstick)
Collage of Turkey with matching food picture (sliced turkey, whole roasted turkey)

Student worksheet: "Circle the foods from animals" (attached)

Book: My Big Book of Farm Animals by Carruth, Jane, Hemlyn Pub. 1973
Book tells about farm animals, their babies, food products.

- -

Vocabulary: Cow; steer, milk, beef, Pig; pork chop, bacon, Chicken; egg, Turkey; drumstick, Fish; meat

ACTIVITY

Preassessment:

Using collages of Farm Animals and matching foods, ask the children to match the food pictures to the appropriate animal.

Motivation:

Read and show pictures from My Big Book of Farm Animals. Ask the children if they would like to learn about the animals on the farm that give us meat - (Acceptable answer: yes).

Development:

1. Using the collages of the animals, name each one. Hold up one food picture at a time and ask the students to guess which animal the food came from. Ask children to name the food if they can and to say the name of the animal that give the food. Have the children place the food picture in the pocket or near the collage of each animal.

2. Have each child circle the pictures of animal foods on the ditto.

Additional Activities:

1. Have the children cut out pictures of meat foods from a selection of pictures representing many types of foods.
2. Visit the meat section of a supermarket and talk with the butcher. The children will learn how the supermarket prepares meat to eat.
3. Prepare eggs in class: prepare them by hard-boiling them. Let the children peel and eat their own egg for snack. Talk about other foods we get from hens and chickens.
4. Prepare Hot Dog Wheels in class: Slice hot dogs crosswise and fry in very little hot oil. Each child can have several wheels. As the children are eating the pennies ask "Are hot dogs a meat?" (Acceptable answer; yes)
5. Pop Goes the ....: Have children act out the slice of bacon as it fries in the pan, pretending to sizzle and shrink as they cook.

Evaluation: Can the children match the foods from animals to the correct animal verbally or using the animal collages? If so they are ready to move on to the next activity.

Additional Resources:

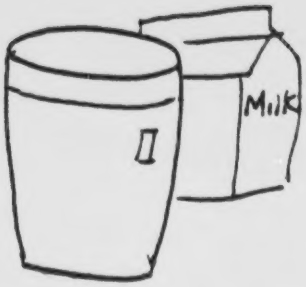
Filmstrip: "Food Sources" from Nutrition: Food, Fuel, Energy; Q-Ed Productions, 1976

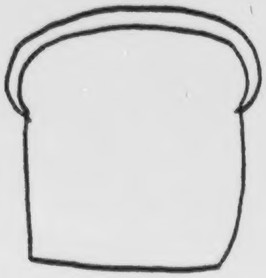
Shows plant and animal sources of foods found in the market and people who help produce the foods.

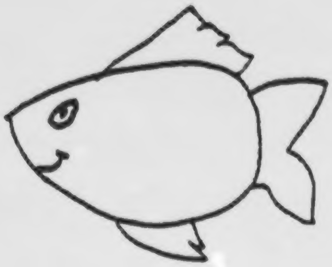
(Available from Project SNAC)

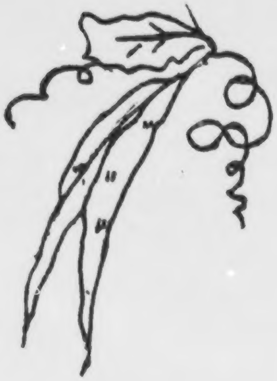
NAME______________________________

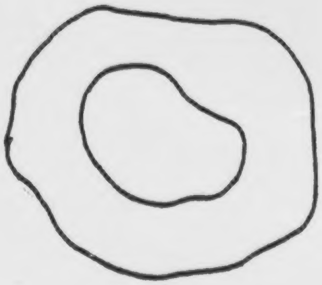
CIRCLE THE FOODS FROM ANIMALS

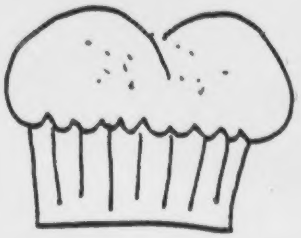


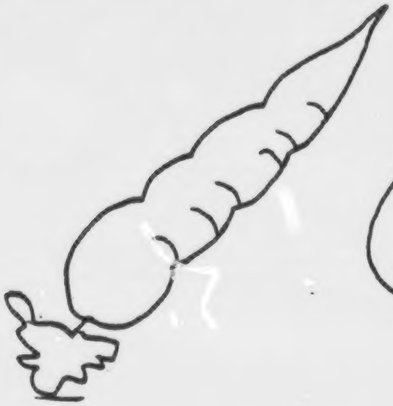


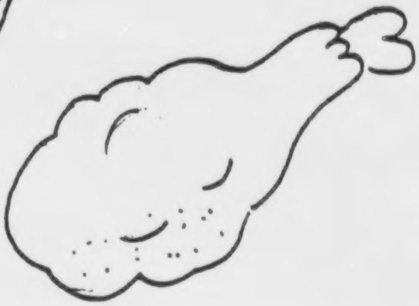


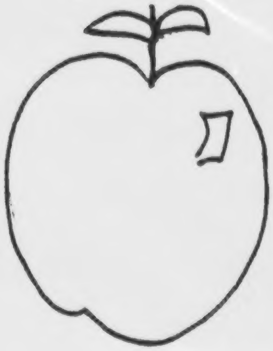


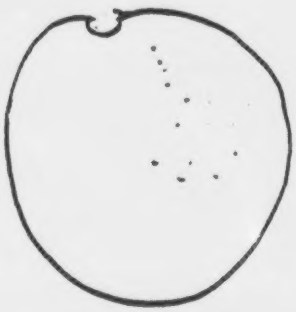


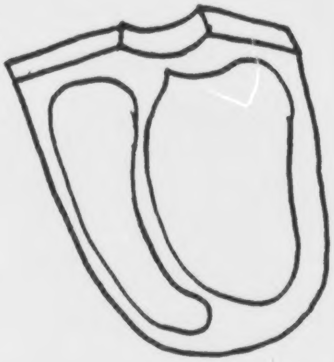


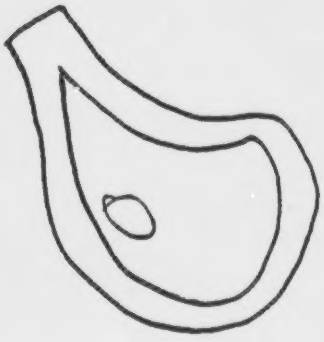












San Mateo City Schools, CA Dept. of Ed.

Kindergarten
Subject Area:
Social Studies

CAREER GAME-HOW WE GET MILK

Behavioral Objective: The student will be able to identify the role of the farmer, truckdriver, storekeeper. and parent in the availability of a food we eat.

Process Objectives: Gathering and sequencing information;

Teacher Information: This unit is an introduction to the careers involved in growing, tranporting, processing, selling, and preparing food. Although milk is the food used here, any food can be followed from farm to home. This unit includes a career lotto game which can be assembled by the teacher and a Milk Career Song to the tune of "Farmer in the Dell". An additional song could be composed by the children to the tune of "Old MacDonald Had a Farm"

Materials: Milk Lotto Cards and Game Board (directions attached)

Milk Song

Milk Carton

New Vocabulary: farmer, truck driver, storekeeper , factory worker , cashier

ACTIVITY

Motivation:

To find out how much the children know about food careers involving milk, display the milk carton and ask the children to name all the people they can think of who help bring them milk to drink and what they do with the milk.

Development:

1. MILK LOTTO GAME : Begin by having children name the person pictured on each flash card. Help the children identify unfamiliar pictures using the terms: cow, farmer, truck driver, store keeper, factory workers, mother, father.

   Give each child an opportunity to match the Lotto Cards with the Game Board. Use questions printed on the gameboard to stimulate questions.

2. MILK CAREER SONG : Lead the song to the tune of "Farmer in the Dell" (See next page)

Evaluation:

1. Hold up each lotto card and ask the children to explain what each person does. Can each child respond correctly?

72

Introduce each verse slowly.

MILK CAREER SONG

To the tune of Farmer in the Dell

I. The cow eats the grass,
The cow eats the grass,
Hi, ho, the dairy oh,
The cow eats the grass.

II. The farmer milks the cow,
The farmer milks the cow,
Hi, ho, the dairy oh,
The farmer milks the cow.

III. The truck driver takes the milk,
The truck driver takes the milk,
Hi, ho, the dairy oh,
The truck driver takes the milk.

IV. The factory bottles the milk,
The factory bottles the milk,
Hi, ho, the dairy oh,
The factory bottles the milk.

V. The Storekeeper stacks the milk,
The storekeeper stacks the milk,
Hi, ho, the dairy
The storekeeper stacks the milk.

OR

V. The milkman delivers the milk,
The milkman delivers the milk,
Hi, ho, the dairy oh,
The milkman delivers the milk.

VI. Our parents buy the milk,
Our parents buy the milk,
Hi, ho, the dairy oh,
Our parents buy the milk.

VII. We all drink the milk,
We all drink the milk,
Hi, ho, the dairy oh,
We all drink the milk.

Additional Songs to Same Tune:

BREAD: The farmer grows the wheat,
The baker bakes the bread,
The truck driver delivers the bread,
The storekeeper stacks the milk,
Parents buy the bread,
We all eat the bread.

FRUIT: The farmer grows the fruit,
The picker picks the fruit,
The truck driver delivers the fruit,
The storekeeper stacks the fruit,
The cashier sells the fruit,
The parents buy the fruit,
We all wash the fruit,
We all eat the fruit.

San Mateo City Schools, CA Dept. of Ed.

DIRECTIONS FOR CAREER LOTTO GAMEBOARD

MATERIALS: 1 Manila Folder
Colored marking pens
Ruler
Scissors
Glue
Laminating material (optional)

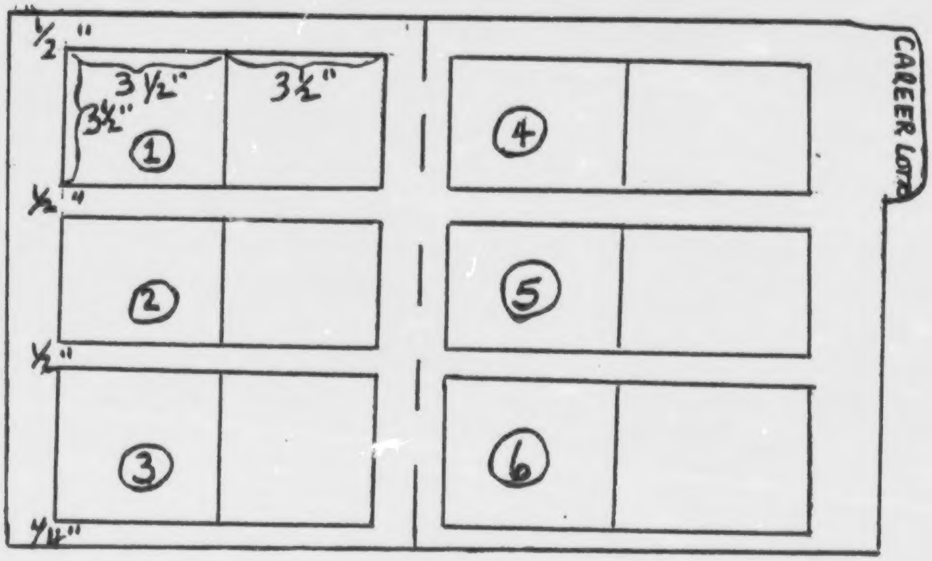
DIRECTIONS: Draw six 3½" X 7" rectangles on the inside of the manila folder.

Color, cut, & glue the gameboard pictures with questions on one side of each rectangle in sequence.

1. Cow
2. Milk Pail
3. Truck
4. Factory
5. Store.
6. Mother and Father

Color and cut the Lotte Cards and mount on 3½" squares. Cover with Clear Contact Paper if desired.

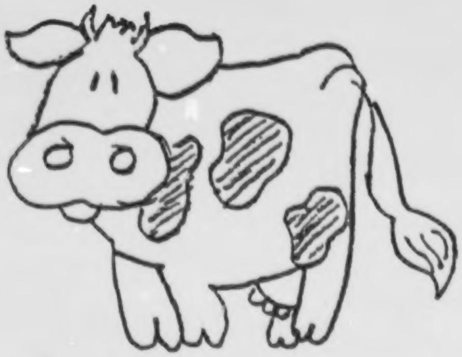
Decorate the outside of the folder with pictures of people working with foods (from magazines)



74

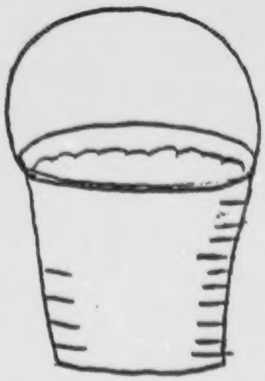
/COLOR, CUT, AND GLUE TO GAMEBOARD ACCORDING TO DIRECTIONS

①



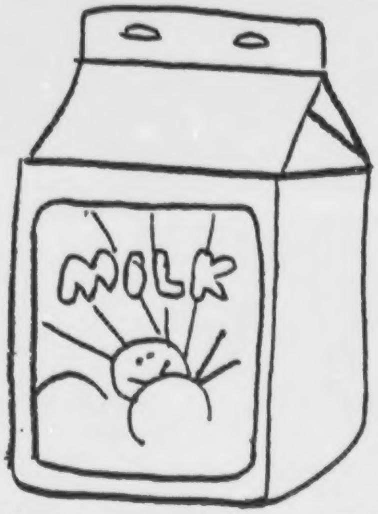
WHAT ANIMAL MAKES THE MILK WE DRINK?

②



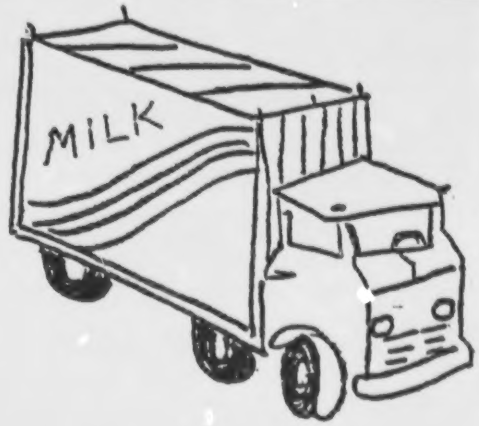
WHO MILKS THE COWS ON THE FARM?

③



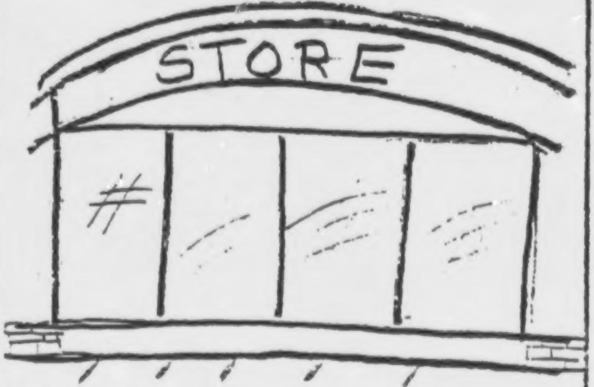
WHO PUTS THE MILK IN CARTONS?

④



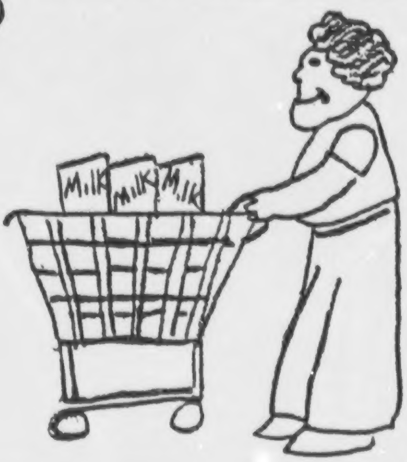
WHO DELIVERS THE MILK TO THE STORE?

⑤



WHO WORKS AT THE STORE WHERE WE BUY OUR MILK?

⑥



WHO BUYS THE MILK WE DRINK AT HOME?

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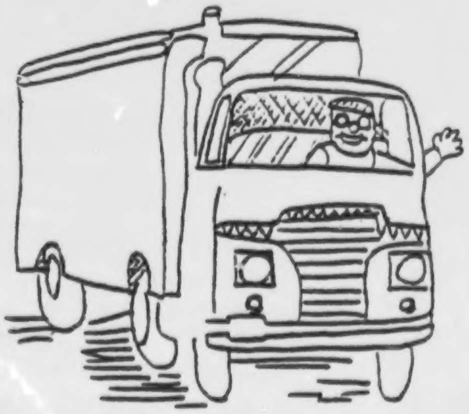
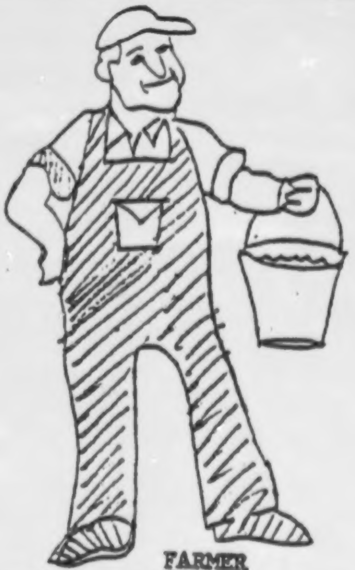
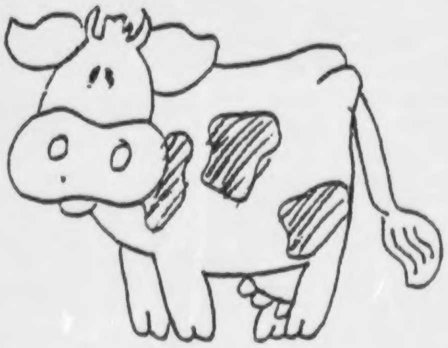
LOTTO CARDS



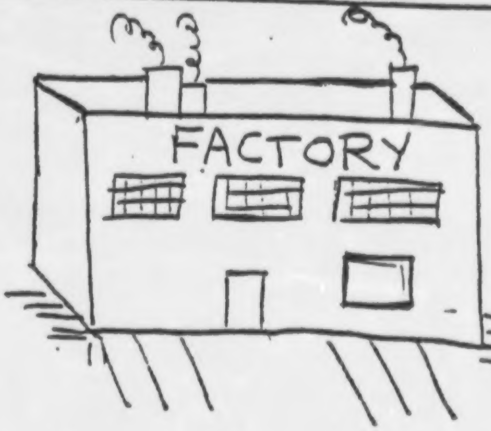
TRUCK DRIVER



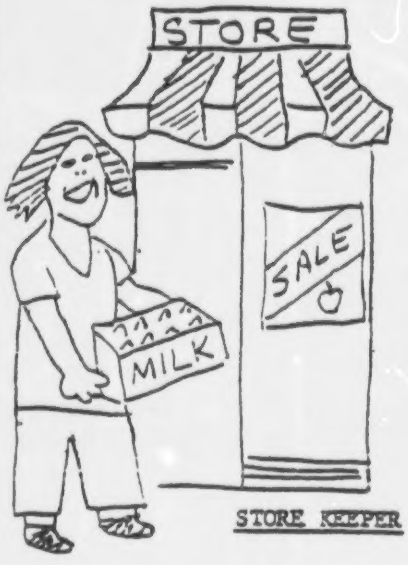
FARMER



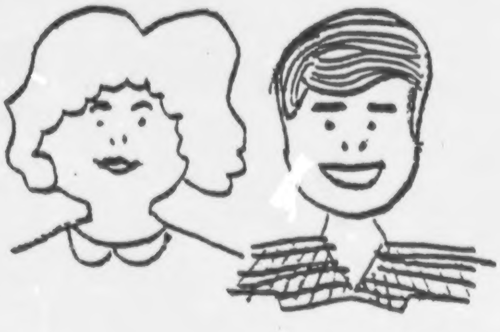
COW



FACTORY WORKERS


STORE
SALE
MILK

STORE KEEPER



MOTHER OR FATHER

San Mateo City Schools, CA Dept. of Ed.

Concept D
B

Kindergarten
Subject Area:
Role Playing

12

WHAT DOES TELEVISION TELL US?

Behavioral Objective: The student will recognize that television advertisement for food do not include many of the foods that are healthy.

Process Objectives: Ability to assume different roles; skill in engaging in the process of observing; understanding the sources of information and ideas.

Teacher Information: Five year olds in the U.S. spend twenty to twenty-four hours in fron of the television every week. Messages aimed at these young children are designed to get the childrens' attention, even if only briefly, repeat a message, and tell it over and over again until the child begins to value and act on the message given. Most of the food ads aimed at children are for foods that are high-sugar, high-fat, high-salt foods.

The message for foods of limited nutritional value is not often balanced with messages about foods which are much more valuable nutritionally. Foods are presented, rather, as sweet, fun to eat, crunchy, and munchy. Prizes are offered.

This unit is designed to get the children's attention aimed at the food ads in a conscious manner so they can see that all foods advertised on TV are not good for them. The teacher should watch childrens' programs one weekday after school and one Saturday to see what it being shown and the frequency.of the ads.

Materials:
(Intro) A box (cereal, detergent, etc.)
(Devel) Letter home
Crayons, paper
Pictures of foods from the four food groups and extras (candy, cake, pop, chips)

Vocabulary: advertisement, television

Motivation:

Teacher holds up "box" and pretends it is cereal as the following skit is acted out by the teacher.

Teacher kneels behind a table with the box and holds box where children can see it. The box is wiggled and bounced up and down to get the children's attention.

Teacher hops up and says in a very happy voice!

Hey, boys and girls!
Try some Mountain Munchy Cereal!
Little sugar-coated tidbits that go "POP" in your mouth.
You'll love the way they crunch and munch!

Don't Wait...Get Some Today!
And send away for the Mountain Man Game on the side of the box.
Mountain Munchy Cereal...To make you feel tops!

Following the "skit" the teacher should ask the following questions:

a. What does this ad want you to do?
b. What does the ad say is the reason we should buy Mountain Munchy Cereal? (They taste good; they go "pop" in mouth)
c. Are we sure they taste good? (No)
d. Why aren't we sure? (we haven't tasted them)
e. Do you see a lot of ads for foods on T.V.? (yes)
f. Do you want to buy everything you see advertised on TV? (no)
g. How will we decide what to buy that we see on TV? (buy what is good for us)
h. Does the ad for this cereal tell us it is good for us? (no)
i. Who can help us decide? (parents, teachers)
j. Is this the only kind of food we need everyday?. (no)
k. What other foods do you need every day? (fruits & vegetables, milk, meat, breads)

Development:

1. Send the letter to parents home with the children. Tell the children to watch TV and count all the ads they see for food. Tell them that their parents can help them count the ads and fill in the lines on the paper.

(See parent letter next page)

2. Back in class have the children decide which types of foods were not advertised on TV and draw pictures of some of these foods.

3. Have children make up ads for some of the pictures they drew. This can be spontaneous by the individual child, or it can be done as a class project.

Evaluation:

Hold up a variety of food pictures from the four food groups and several high-sugar, high-fat extra foods. Ask the children to indicate the foods that are the least advertised on television. As each food is identified, ask the children if the food is a healthy food that should be included in the diet (yes, if the foods that are identidies are from the four food groups)

Additional Activities:

1. Compare the cereal package to the peel of an orange, the skin of a banana, or the shell of a peanut. Have the children "discover" the "prizes" inside these foods.

2. Mighty Milk vs. Prince Peanut. Have students battle over which food is most fun to eat. Milk is white, smooth, and wet. Peanuts are crunchy, come in a hard shell that's fun to open, and come two to a shell. Both foods are high in protein we need every day to grow.

3. Sing the "Fruit Song" to the tune of "Old MacDonald Had a Farm"

Old MacDonald had some fruit,
Had some fruit for me.
With a fruit, fruit here and a fruit, fruit there-
Here a fruit, there a fruit,
Everywhere a fruit, fruit,
Old MacDonald had some fruit,
Had some fruit for me.

Additional Resources:

Filmstrips: "Catch a Commercial" from ALICE IN CONSUMERLAND, Lakeshore Curriculum Material, 1974.

A good introduction to television advertising. (Available from SM City School IMC #SFS 640.73 Cass)

"The Breakfast" from ECONOMICS FOR PRIMARIES, Q-Ed Prod., 1973.

A LETTER HOME

Date:____________

Dear Family,

Please help us find out if the foods advertised on television are really good for us. We are trying to decide what kinds of foods are nutritious.

Will you help us by making a checkmark next to the foods that are advertised on television?

____________ MILK AND MILK PRODUCTS (cheese, yogurt, cottage cheese)

____________ FRUITS

____________ VEGETABLES

____________ CHIPS (Potato chips, corn chips)

____________ BREADS AND CEREAL (other than sugary, presweetened kind)

____________ COOKIES, CAKES, PIES

____________ MUFFINS, BISCUITS

____________ PRESWEETENED CEREALS

____________ MACARONI, NOODLES

____________ MEAT, FISH, POULTRY

____________ PEANUTS, PEANUT BUTTER

____________ EGGS, DRIED BEANS AND DRIED PEAS

____________ CANDY

____________ SODA POP

____________ GUM

Our class is going to decide what other kinds of foods should be advertised on TV.

Your Child, ____________________(child's name)

San Mateo City Schools, CA Dept. of Ed.

ENRICHMENT

Kindergarten
Subject Area: Science
Math

WE EAT NUTS

Behavioral Objective: The student will name two types of nuts we eat. The student will identify nuts as a healthy snack food.

Process Objective: Enumeration and listing, differentiating; skill in engaging in the processes of observing, inferring and valuing.

Teacher Information: Nuts are the fruits of the plant consisting of a kernel or seed enclosed in a woody shell such as walnut, coconut, almond, filbert. Peanuts are not genuine nuts. They are actually seeds and are in the legume family. Legumes include all seeds which grow in pods. Nuts and legumes are both good sources of plant protein and make healthy snack choices.

For the purpose of this lesson, peanuts will be included in the next category.

Materials:

Food
Roasted Peanuts in shell - 2 large bags
1 coconut
Dish of nuts in shell - filbert, walnut, pecan, almond
Crackers

Utensils
Blender or nut grinder
spatula, spreading knife
nutcracker
ice pick

Worksheets
"Today I Tasted......"
"How Many in One Handful?"

Vocabulary: nuts, peanut, coconut, shell, baby plant, biggest, littlest

ACTIVITY

Motivation:

Ask children to name nuts they have eaten. Explain that because nuts are good for them, they will have a chance to taste and prepare peanut butter and coconut in class.

Development:

1. Peanuts and peanut butter
   Give each child one peanut to open, and describe orally.

Show the children how to open the peanut shell and find the baby plant.

Ask each child to take one handful of peanuts. Have each child try to count how many in one handful.

Explain that the class will make peanut butter. Have children shell the one handful of peanuts and add to the blender. Blend the peanut butter as the children watch (recipe attached).

Have students wash hands, spread peanut butter on a cracker, taste it, and record reactions on "I tasted ....." activity sheet.

2. Coconut

Introduce the coconut by asking "What is the biggest nut in the world?" (coconut) Have children describe the shell as they feel it. Ask "How many are in one handful?"

Drain the juice out of the coconut and crack on the sidewalk with a hammer. Have everyone taste the coconut and record reaction on "I tasted ...." sheet.

3. Other nuts

Introduce the remaining nuts by naming them and cracking one open.

Leave one container of each of the nuts and a set of "How Many In One Handful" worksheet on a table.

After each child has completed the worksheet, have a nut tasting party.

Point out that nuts are grown on a tree or a bush and that they are a part of the plant.

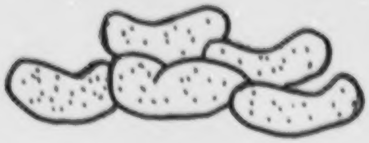
Emphasize in discussion that nuts are good snack foods because they give lots of energy but don't have much sugar.

Evaluation:

Ask children to tell about nuts and name their favorite nut.

NAME________________

TODAY I TASTED NUTS


PEANUTS

COCONUT

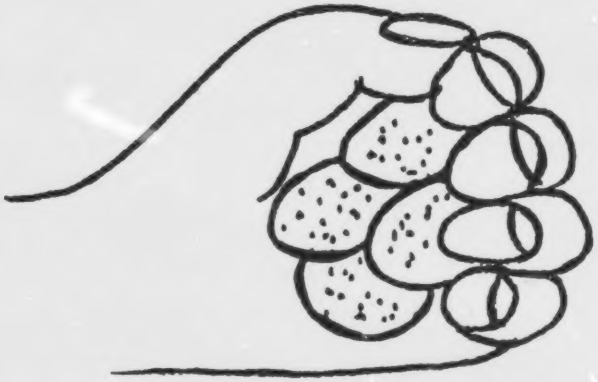
THESE NUTS LOOK DIFFERENT.

DO THEY TASTE DIFFERENT?

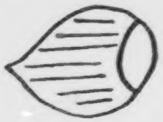
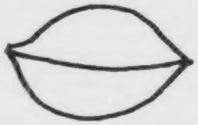
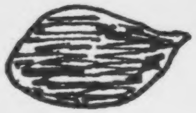
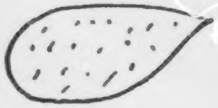
THEY TASTED____.

San Mateo City Schools, CA Dept. of Ed.

NAME ______________________



HOW MANY IN ONE HANDFUL?

FILBERT	WALNUT	PECAN	ALMOND
			

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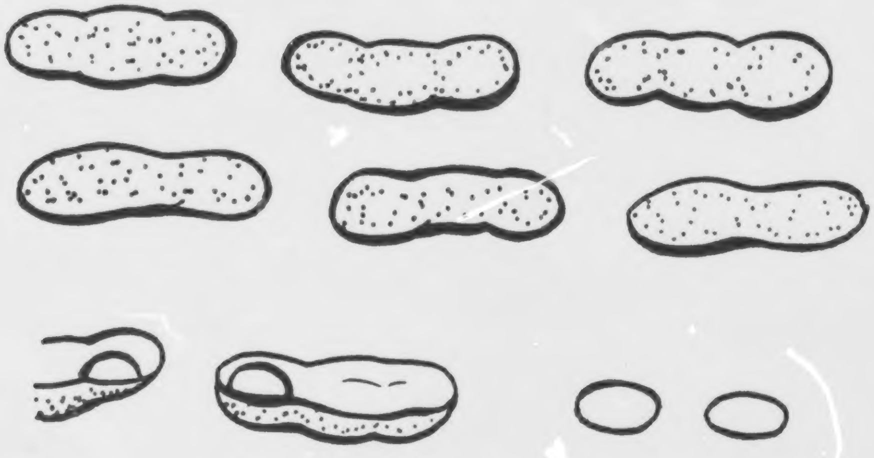
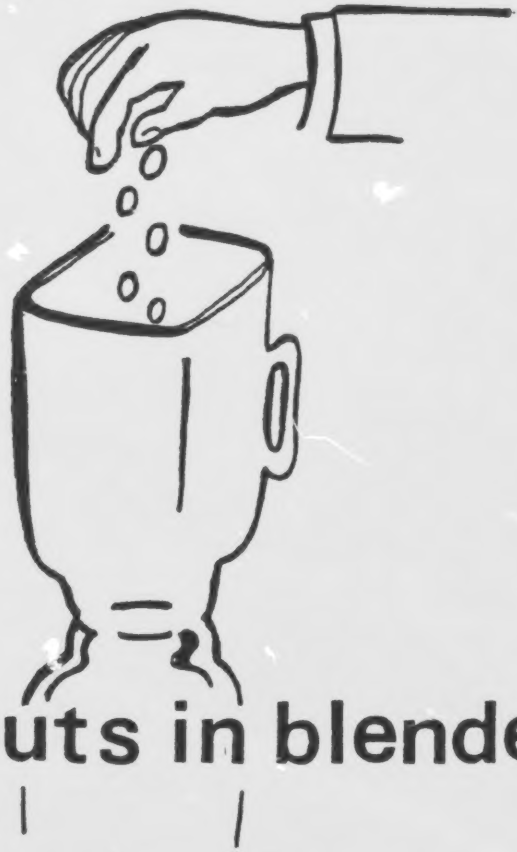
PEANUT BUTTER

1.



Open 6 peanuts

2.



Put peanuts in blender jar

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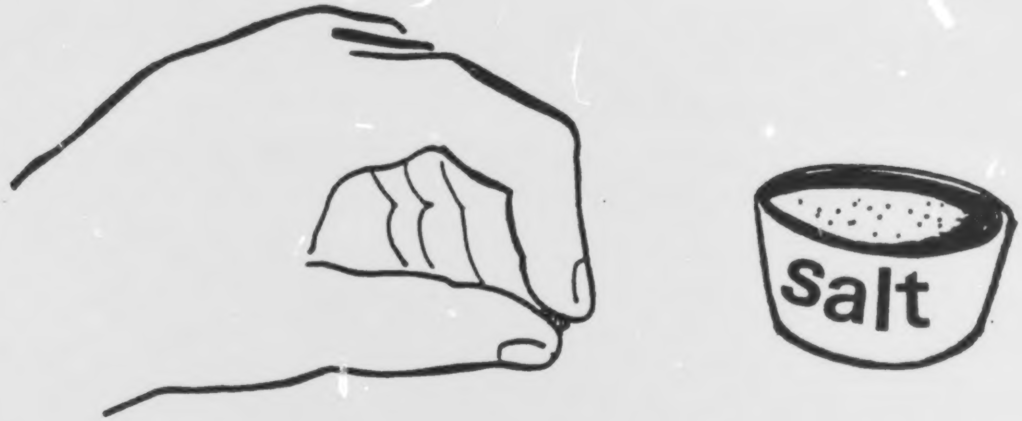
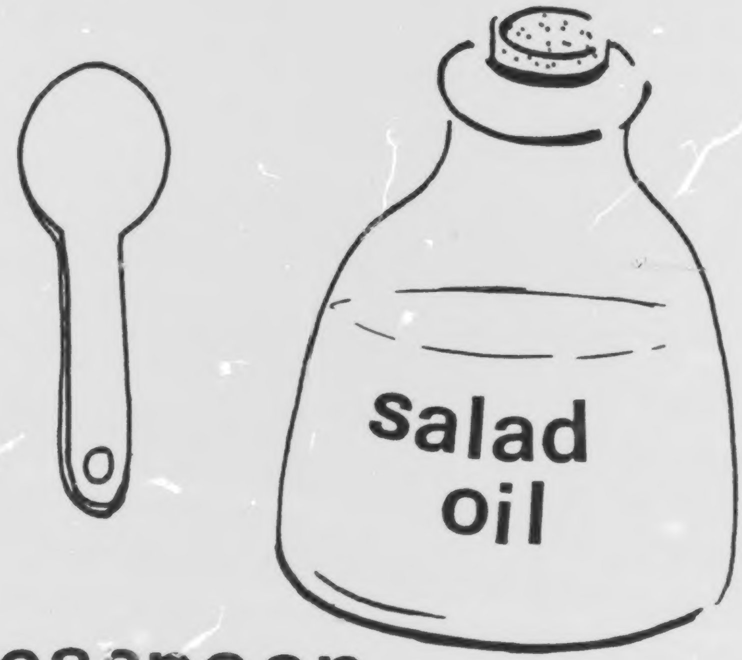
3.



1 pinch

4.



1 teaspoon

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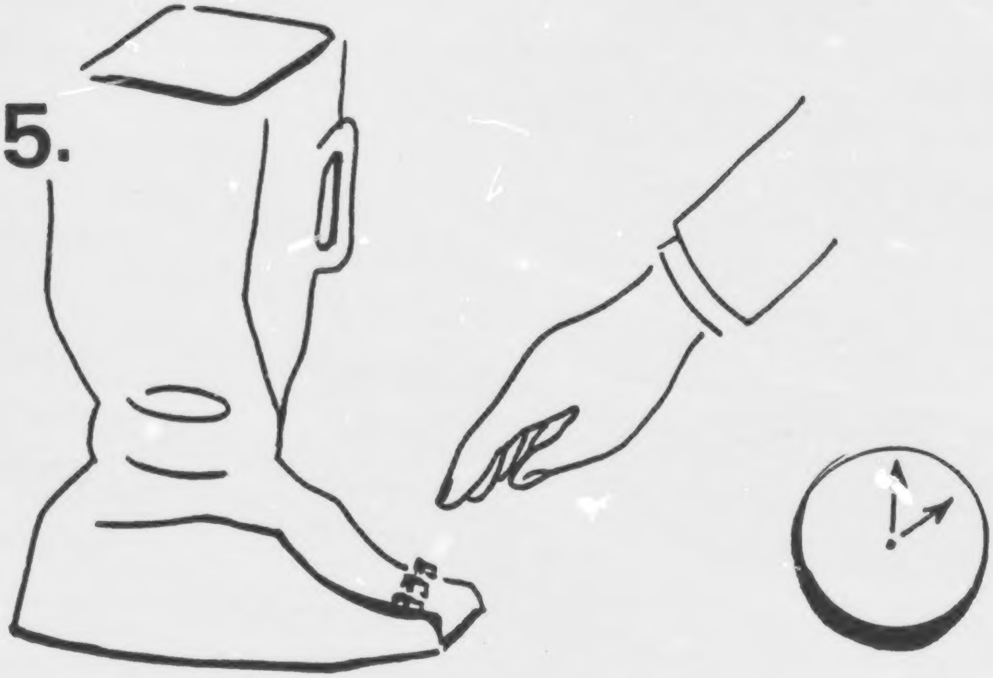
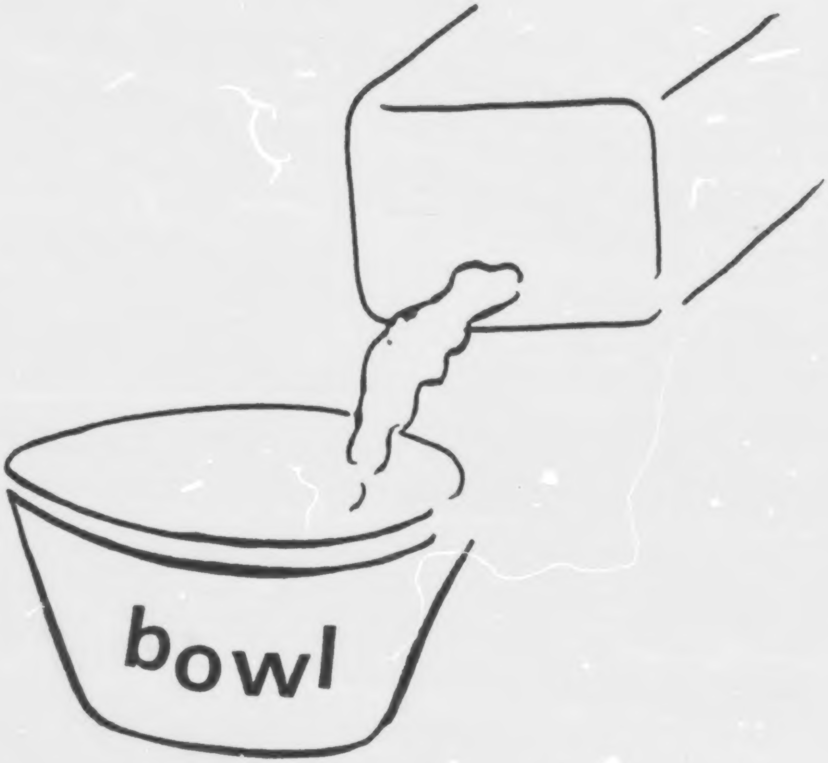
5.



1 minute

6.



San Mateo City Schools, CA Dept. of Ed.

Concept E

ENRICHMENT

Kindergarten
Subject Area: Science
Health

14

MAKING RAISINS - FOOD DRYING

Behavioral Objective: The student will observe and describe one method of food preservation in the drying of a fruit (grapes).

Process Objective: Tolerance of ambiguous situations where final solutions must be delayed; skill in engaging in the processes of observing, inferring, and valuing; acquaintance with the development of scientific methods and major theories.

Teacher Information: This is one of the on going activities that can be done with many fruits and vegetables. Most fruits and vegetables will dry overnight if sliced thin. Raisins may take over a week. Be patient and explore all of the changes that gradually take place.

Materials:

Flat try
2-3 pounds of seedless grapes
Food Dehydrator or sunshine
Student worksheet "Today I Tasted Fruits"

Vocabulary: dry, grapes, raisins

ACTIVITY

Motivation:

Make or obtain a food dryer for classroom use or begin this activity in September where there is still plenty of sunshine and warm weather.

Show fresh grapes to the students. Name and have children suggest words that describe their shape and color. Ask for volunteers to wash their hands and the grapes.

Have children taste the fresh grapes and describe them orally. (Their taste, smell, texture, and inside appearance.) Remind them that they are using their eyes, nose, mouth, and fingers identifying the food. Save at least one pound of grapes to make raisins, (see raisin recipe).

Development:

Arrange grapes in a single layer on drying tray. Cover with a loosely draped paper towel or gauze. Write down the children's observations every day so that by the time the grapes have turned to raisins there will be a step by step description of the transformation. Discuss why the grapes shrivel (water loss) and turn brown. (enzymes and heat).

Discuss the importance of drying fruits as a way of making them last a long time. They will not spoil as fast as fresh fruits. Germs cannot grow without water so dried fruit will stay safe to eat. Also the natural sugar in fruits and vegetables is a natural preservative. The skins of the fruit is important for separating the fruit from the air and protecting it from airborne organisms.

Taste raisins and have children describe taste. Supplement with purchased raisins if desired.

Evaluation:

Ask the children to name the steps in drying fruit. Do not give the correct answer until everyone has had a chance to respond. Ask which would last longer on a shelf grapes or raisins?

RAISIN RECIPE

GET GREEN GRAPES.

WASH THE GRAPES.

PULL THEM APART.

PUT THEM IN THE SUN OR OVER THE LIGHTBULB.

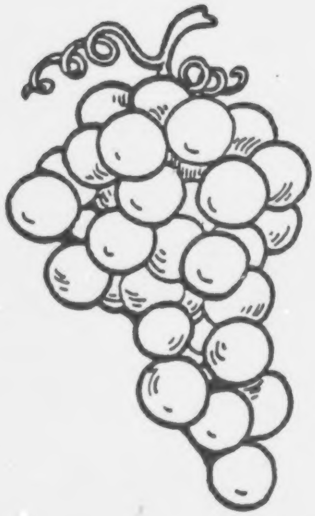
WAIT.... WAIT.... AND WAIT

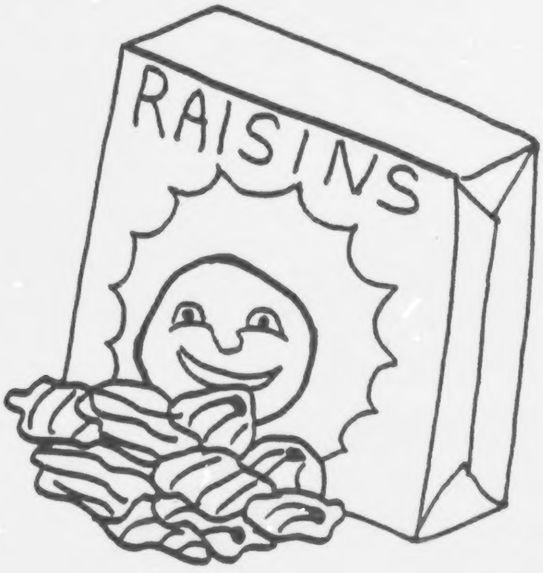
THEY GET SMALLER AND SMALLER.

THEY TURN BROWN AND BLACK.

THEY GET HARD AND DRY.

THEY ARE RAISINS.





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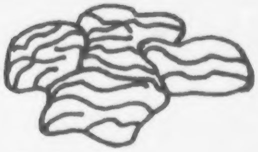
NAME______________

TODAY I TASTED FRUITS

GRAPES


RAISINS

THESE FRUITS LOOK DIFFERENT.

DO THEY TASTE DIFFERENT?

THEY TASTED______________________________.

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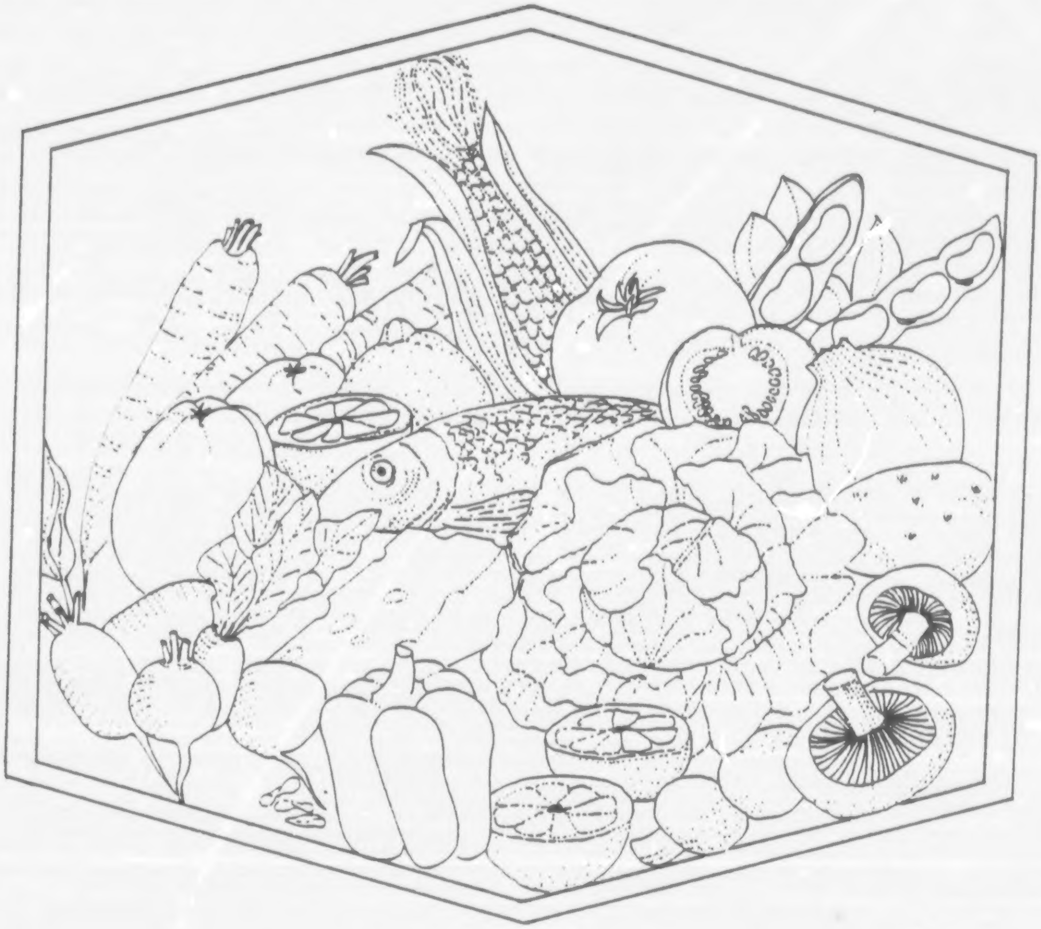
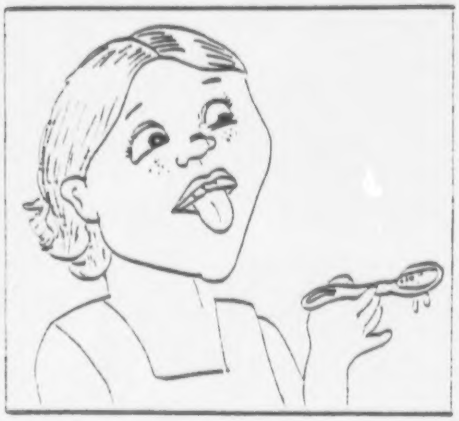
WORKSHEET ANSWER KEYS

Answer keys for the worksheets in the previous lessons have been reduced in size and arranged four to a page in sequential order. Each answer has the same title and page number as the original worksheet used in the lesson.



ANSWER KEY

YOUR FOOD TASTERS



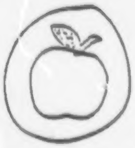
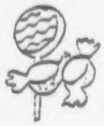
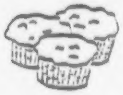
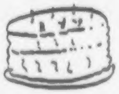
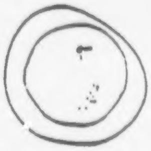
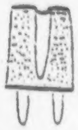
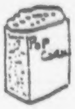
WHAT DO YOU USE TO TASTE YOUR FOOD? TONGUE

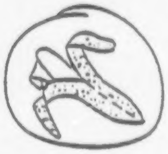
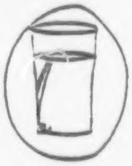
WHAT DO YOU USE TO SMELL YOUR FOOD? NOSE

WHAT DO YOU USE TO SEE YOUR FOOD? EYES

NAME ANSWER KEY

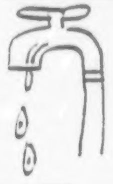
CIRCLE THE HEALTHY SNACKS

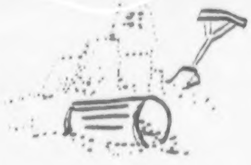








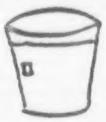



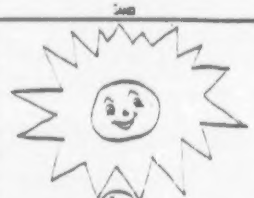
NAME ANSWER KEY

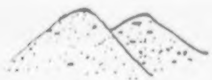
WHAT DO PLANTS NEED TO GROW?

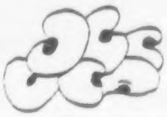

WATER


SAND


MILK

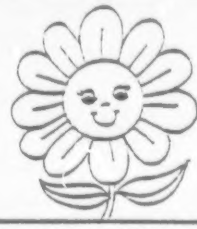

SUN


SOIL


SEEDS

NAME ANSWER KEY

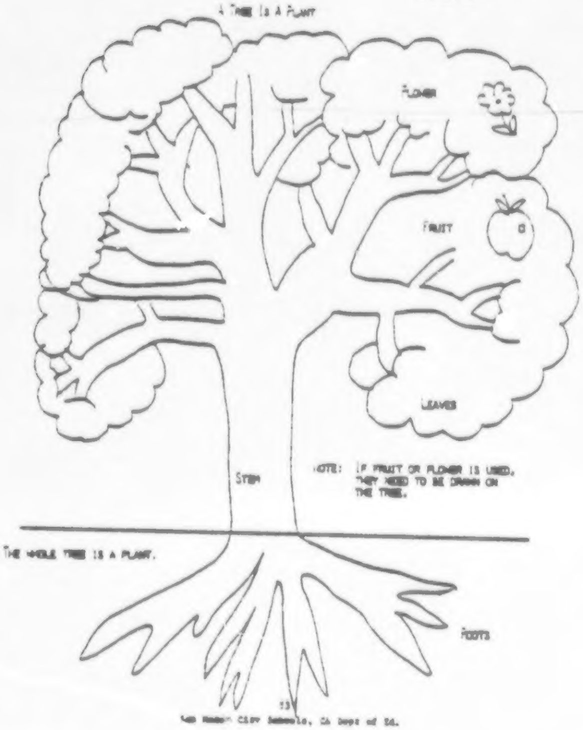
MAKE A LIST OF
ALL THINGS YOU
NEED TO MAKE
ME GROW.



SUN, WATER, SOIL

ANSWER KEY

A TREE IS A PLANT


FLOWER
FRUIT
LEAVES
STEM
ROOTS

NOTE: IF FRUIT OR FLOWER IS USED, THEY NEED TO BE DRAWN ON THE TREE.

THE WHOLE TREE IS A PLANT.

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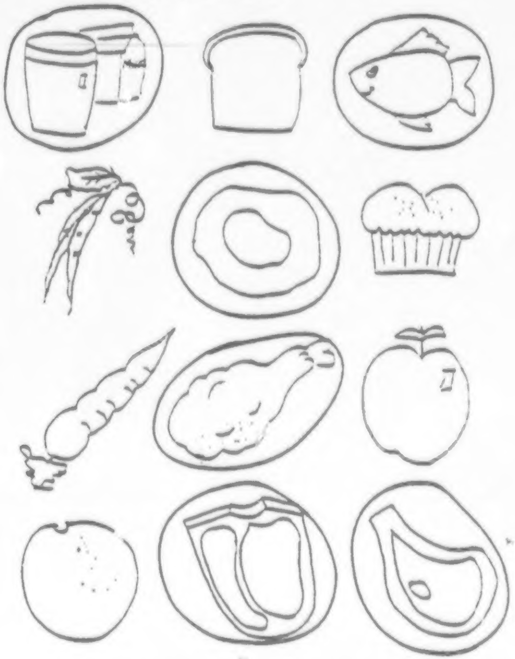
NAME ANSWER KEY

CIRCLE THE FOODS FROM ANIMALS



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SNAC

San Mateo Nutrition Activity Curriculum

"Swing Into Nutrition"

SAN MATEO CITY SCHOOL DISTRICT
50 Peninsula Avenue
P.O. Box K
San Mateo, California 94402

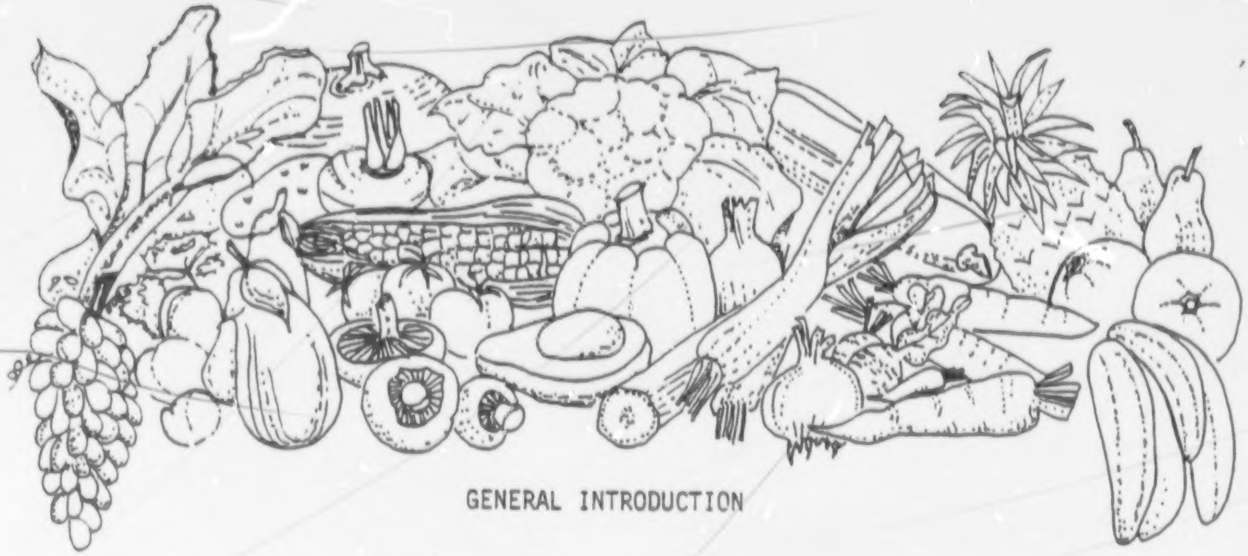
PS 0[illegible]893

Dr. Julian Crocker, Superintendent
Dr. Lillian Wehmeyer, Assistant Superintendent

Miss Deborah Barley
Nutrition Education Specialist
Project Director

Funded 1976-80 By California State Department of Education
1975 Child Nutrition Facilities Act

January 1980
San Mateo City School District



GENERAL INTRODUCTION

Nutrition Education starts with you! The San Mateo City School District has designed a program in the elementary grades to integrate nutrition education into the general curriculum.

The goal of this program is to prepare elementary grade students to develop and improve healthful food habits. By the time the student leaves the elementary school, he/she should understand the relationship between food habits and well-being; should express concern that his/her food choices promote well-being; should demonstrate a willingness to taste new foods; and should be prepared to make informed decisions regarding his/her food choices. To achieve these purposes, the program focuses on the theme:

"SWING INTO NUTRITION!"

The program needs and encourages active support and involvement of students, parents, and staff members of a multicultural population. The program is based on five concepts:

(A) Food Choices and Health
(B) Factors influencing Food Choices
(C) Food Related Careers
(D) Consumer Competencies
(E) Food Safety and Sanitation

It is a multi-disciplinary curriculum in which cognitive and effective objectives in all subject areas including language arts, science, health, social studies, and math are integrated with nutrition concepts and synthesized with appropriate process goals (teaching and instructional methods). These process goals have three sources: the person, society, and the disciplines.

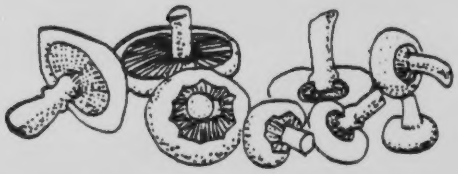
Each lesson contains directions which include behavioral and process objectives, a concept focus which is indicated by a letter in the upper left-hand corner, teacher information, materials needed or suggested, specific directions for motivation and activities, evaluation or pupil performance, and additional resources and activities. Cooking and food preparation activities are occasionally suggested. To supplement these activities, a wide collection of cookbooks and recipes are available in the Project Resource Library.

The lessons are numbered in sequence, but the teacher may rearrange the lessons to suit classroom needs and schedule. In addition to these lessons, there are ENRICHMENT lessons at the end of each Curriculum Guide to reinforce previous lessons.

All of the lessons and activities mentioned in this Curriculum Guide have been designed, tested, evaluated and articulated by Project teachers and nutritionists. They have proven effective for all participants.

Remember: The nutrition activities involving children are not only educational but fun. So join us and ......

"SWING INTO NUTRITION!"



ACKNOWLEDGEMENTS

Many, many people have helped and contributed valuable time in the development, teaching, and evaluation of the San Mateo Nutrition Education Project. The Nutrition Education Staff in San Mateo City School District wishes to acknowledge and thank these persons for their special achievements.

Food Service Director	Carvill Veech (Project Director 1976-79)
Nutrition Education Aide	Lenore Hicks
The Board of Education	Donald Hill Sue Lempert Albert Di Matteo Robert Braun Jeanne Schlueter
All Project K-5 Teachers	Laurel School North Shoreview School
Project Principals	Warren Kofler Charles Moorer
Graphic Artists	Brooke Travers William Kirk David Moore

AND

School Food Service staff members, parents, school nurses, the Project Evaluator Howard Wolff, Ph.D., Special Curriculum Consultant Anna Nuernberger, and Nutrition Education secretarial staff, especially Althea Jocz and Barbara Harris.

SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

(SNAC)

"SWING INTO NUTRITION!"

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Worksheet Answer Keys . . . . 72 - 74

SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

CURRICULUM GUIDE

First Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
1	What Happens After You Chew and Swallow?	To identify two sequential steps in digestion.	A	Health	1
	"Where Does Food Go?" *Worksheet (fill in)*	To illustrate the first two steps in digestion.	A	Health	3
2	Keeping Food Clean	To identify two methods used to keep food safe.	E	Science Math	5
	"Meet Jamie Germ, the Food Spoiler" *Play*	To illustrate the importance of food handling.	E	Science Health Art	8
3	Eating For Three Good Reasons	To identify the physical needs for food.	A	Health	10
	"Dandelion: The Lion Who Lost His Roar" *Flannel board story*	To reinforce the physical needs for food.	A	Health Art	12
	"Who Needs More Food?" *Worksheet (circling)*	To identify who needs more food for their body.	A	Health	27
4	Be A Smart Snacker	To identify snacks that promote dental health.	A	Health Science	28
	"Foods Good For Your Teeth" *Worksheet (circling)*	To reinforce the needs of foods that are good for your teeth.	A	Health	30
	"Circle The Health Snacks" *Worksheet (circling)*	To identify the healthy snack to be eaten.	A	Health	31
	"Can You Find The Smart Snacks?" *Worksheet*	To review and reinforce the healthy snacks to be eaten.	A	Health	32
	Letter Home *Writing*	To illustrate the need for healthy snacks.	A	Health Language Arts	33
5	Milk And The Dairy Farm	To trace the production of milk from farm to table.	C,D	Science Social Studies	34

CURRICULUM GUIDE

First Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
	"The Cow Gives Us Milk" *Worksheet (circling)*	To identify the foods from milk.	D	Health	36
	"All About Milk" *Worksheet (circling)*	To reinforce the production of milk from farm to table.	C,D	Science	37
	"Food Source Collage" *Wall Collage*	To review and reinforce where milk comes from.	C,D	Science Art	38
6	Where We Get Meat And Eggs	To explore the role of animals as a source of food.	C,D	Science Social Studies	39
	"Which Farm Animal" *Worksheet (matching)*	To reinforce animals as a source of food.	D	Science	41
7	Fruit and Vegetable Farms	To identify fruits and vegetables and people involved in their production.	A,C	Health Social Studies	42
	"Today I Tasted" *Worksheet (fill-in)*	To identify the names of new fruits and vegetables with their pictures.	A	Health	45
	"Circle The Fruits And Vegetables" *Worksheet*	To illustrate fruits and vegetables that we eat.	D	Health Science	46
	"My Vegetable - Fruit Book" *Coloring*	To illustrate fruits and vegetables that we eat.	D	Art Health	47
8	Breads and Grains	To identify grains used for food and the people involved in baking bread.	C,D	Science Social Studies	50
	"The Bread Song" *Song*	To reinforce the involvement in baking bread.	C	Social Studies	52
	"Foods From Wheat" *Worksheet (circling)*	To identify foods made from wheat.	D	Science	53
9	Something's Fishy	To identify fish we eat.	C,E	Science	54

CURRICULUM GUIDE

First Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
10	Vegetable - Fruit Bingo Game	To identify the fruit and vegetables we eat.	C	Science Art	57
	ENRICHMENT				
	"Vegetable - Fruit Bingo" *Game*	To match pairs of pictures of a variety of fruits and vegetables in a game board.	D	Science Art	58

Concept A

First Grade
Subject Area: Health

WHAT HAPPENS AFTER YOU CHEW AND SWALLOW?

Behavioral Objective: The student will identify two sequential steps in digestion.

Process Objective: Awareness of the tentativeness and continual reconstruction of knowledge, commitment to the inductive and deductive methods of verifying knowledge and testing values.

Teacher Information: The concept of food being broken down in the body for energy and growth of body parts is difficult to grasp. However the basis for this understanding can be started by a simple tasting-chewing-swallowing activity.

- -

Materials: Apples and/or Crackers
Paring knife
Bulletin Board Digestion (directions attached)
Worksheet - "Where Does Food Go"

- -

Vocabulary: chew, swallow, mouth, stomach, digestion

ACTIVITY

Motivation:

Review the concept that our bodies need food for growth and energy.

Ask the children if they have an idea of how our body uses the food we eat. Ask "What do we do with food so that our bodies can use it to grow and stay healthy?" (Eat it.)

Hold the apple and ask "Can my body use this apple to grow or to get energy if I just hold it in my hand?" (No) What is the first thing I have to do? (Eat it)

Cut the apple into bite sized pieces and give one small piece to each child. Introduce the concept of digestion by asking "have you ever wondered what happens to food after you chew it? Let's all eat our apple and think about what is happening to it.

Development:

1. After the children chew the apple and swallow it, ask "What did you do to the apple?" (chewed it). "What happens to the apple when you chew it?" (gets smaller.) "Where does the apple go when you swallow it?" (Stomach)

   Explain that chewing and swallowing are the first two things we do with food so our body can use it. Discuss how the teeth break food into tiny pieces.

   Ask the children to think about what is happening to their food at their next meal. They may want to discuss this with parents or older brothers or sisters at home.

2. Have each child complete the worksheet entitled "Where Does Food Go?" and describe what happens to food after they chew it.

   (You may want to explain that food goes from the stomach into the blood so that it can get to all the parts of the body.)

Evaluation:

Has every child completed the worksheet "Where Does Food Go?" correctly, and explained two sequential steps in digestion as related to the drawing?

Additional Activities:

1. Make a Digestion Bulletin Board using the attached directions as a guide.
2. Make a large outline of one or more children on butcher paper, cut out, and have children paint or paste magazine food pictures - (healthy foods!) inside the body form. Display the Art Work in the School Cafeteria.

Additional Resources:

Film: Your Food - Color - 7 minutes 1964 (Grades K-2) Available from County IMC. Order film #0669.

Shows what happens to food when it enters the digestive system, and relates to other body systems. Presents examples of a balanced diet.

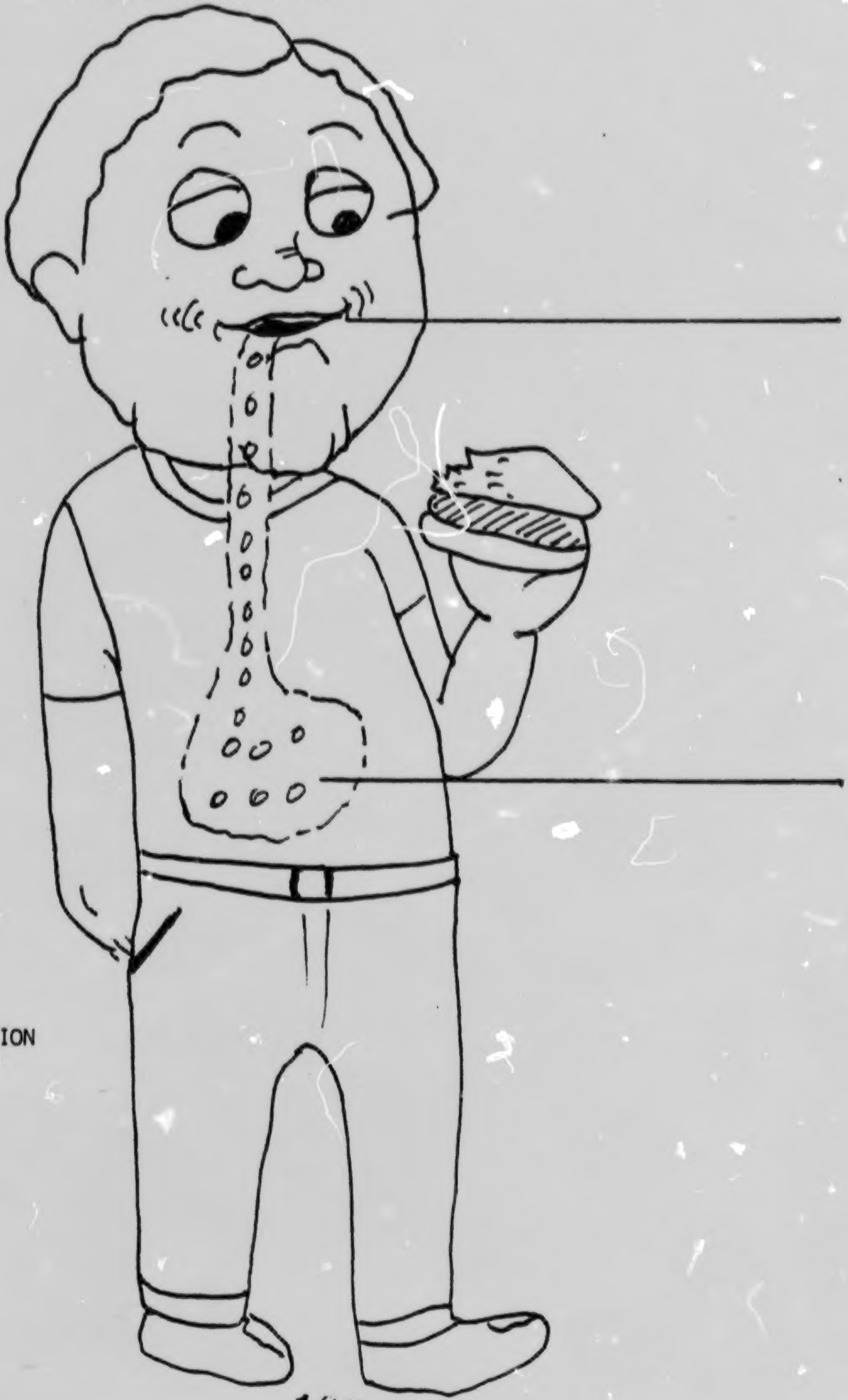
Filmstrip:

"You and the Living Machine" from You and Your Health, Walt Disney Educational Media Co. (From District IMC or Project SNAC)

Color, sound, 7 minutes, most suitable for grades 1-3, but the delightful Jiminy Cricket makes the care of the body seem very important. This filmstrip compares the body to a precision machine. Lists specific rules for taking care of human machines. Introduces digestion, four food groups.

NAME_______________________

WHERE DOES FOOD GO?



FIRST STEPS IN DIGESTION

1. CHEW, SWALLOW

2. STOMACH

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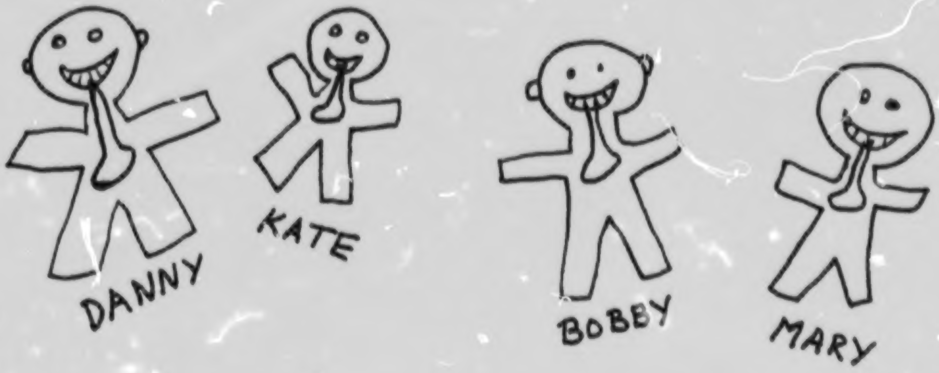
BULLETIN BOARD IDEA

DIGESTION



FIRST I CHEW, CHEW, CHEW. THEN I SWALLOW, SWALLOW, SWALLOW.
THEN MY STOMACH SAYS, "HELLO", AND "THANK YOU".

MAKE A PATTERN OF A BODY OUTLINE ON LIGHTWEIGHT CARDBOARD. CUT OUT AND TRACE ONE FOR EACH CHILD. HAVE EACH CHILD DRAW A MOUTH WITH TEETH, A FOOD TUBE, AND A STOMACH. FOLLOW AN IMAGINARY FOOD THROUGH THE BODY TO THE STOMACH. NAME EACH PART SEVERAL TIMES. HAVE CHILDREN REPEAT NAMES.

THE SAME OUTLINE CAN BE USED TO STUDY THE SKELETON AND HOW MILK HELPS TO BUILD HEALTHY BONES.

First Grade
Subject Area: Science
Math

KEEPING FOOD CLEAN

Behavorial Objective: The student will identify personal cleanliness and proper food storage as two methods used to keep food safe.

Process Objective: Explaining items of identified information, relating points to each other; determining cause and effect relationships.

Teacher Information: Young children are told to wash their hands before they eat and by First Grade indicate that this is important. However, children seldom wash their hands prior to lunch at school. This activity combines reading about hand washing and provides guided practice. It is preliminary to any food preparation experience in school.

According to six year olds surveyed, the refrigerator is where food is kept to keep them cold, but little of any understanding of the importance of storing perishable meats, milk, and produce is recognized. Because children carry lunches to school and frequently get snacks at home for themselves, careful food handling and storage becomes important for the first grader.

To guide discussion, here is some information the teacher may pass along, if desired.

1. Hand washing should preceed any handling of food and should include soapy water, preferably warm, and friction. All dishes and counters should be washed.

2. All perishable foods, such as meat products and milk products should be stored in the refrigerator or the freezer to prevent spoilage and bacterial growth.

3. Fresh fruits and vegetables should be stored in a cool place to retain vitamins and freshness.

4. Breads, cereals, unopened, canned, and dried foods belong in a cupboard, tightly covered to keep bugs and moisture out.

Materials:
Script "Meet Jamie Germ, the Food Spoiler" (attached)
Jamie Germ puppet (see script)
Soapy water, paper towels
Grocery bag with food pictures and empty packages
Signs - refrigerator, freezer, cupboard
Cheese slices

Vocabulary: clean, soap, rub, cool, refrigerator, safe, wash, friction, cold, cupboard, germs

ACTIVITY

Motivation:

Present Jamie Germ play. After the children have heard the play, ask them to name ways they can take good care of food.

Development:

1. **Hand washing:** Show the proper way to wash hands - wet them, add soap, rub all the way to the wrist by twisting the hands together, rinse well, and dry. Have each child practice at the sink.

   Repeat that "germs" and dirt on our hands can get on our food and we might get sick if the germs are swallowed.

2. **Food Storage:** Display a large grocery bag full of food pictures and packages. Explain that you have just come home from the grocery store and you want to put the foods away - in the refrigerator, freezer, or cupboard. Explain that it is important to put food at the right temperature so it won't spoil.

   Have students suggest the proper storage place. Place each food in a box or on a table with the appropriate title.

   Cheese Storage Experiment (simple activity)

   Obtain a slice of cheese. Leave one out uncovered and refrigerate and cover other. Compare each day for appearance and smell. Conclude that cheese lasts longer when it is refrigerated and covered.

   This activity may be repeated for meat, milk, and produce.

Evaluation:

Ask students to draw pictures to illustrate two ways of keeping food fresh and clean. (wash hands, put food in refrigerator, cover food)

Additional Activities:

1) Allow children to wash hands before lunch each day before the bell.

2) Invite the school nurse to class to explain the importance of cleanliness and to demonstrate hand washing techniques.

3) Arrange a tour of the school kitchen to see how the cafeteria workers handle and store food to keep it clean and safe.

4) Art: Make a collage of magazine pictures that show people or products that are related to cleanliness or cleaning.

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Additional Resources:

Booklet: Kim Helps Care For Food and

Kim Remembers to Wash from Yakima Home Economics Association, 1975. (Copies available from Project SNAC)

Filmstrip: Good Health Habits, Coronet, (District IMC #SFS 613 Set)

A six-part filmstrip set and teachers guide for primary and intermediate grades. The filmstrip entitled "Keeping Well" shows the importance of cleanliness, good food, and exercise to stay well.

"Cleaning Up" from BEING HEALTHY, Eyegate, 1974 (District IMC (# SFS 613 Cass)

Designed for early primary grades.

Resource Kit: The Man Who Didn't Wash His Dishes (District IMC)

Books and cassette for listening center.

Concept E

MEET JAMIE GERM-FOOD SPOILER

(A Play About Food Spoilage with a Puppet and Audience Participation)

Materials: Hand puppet made of cloth or a paper bag (vivid colors such as lime green, orange, purple)

To make Jamie the Germ from a small lunch bag, paint eyes, spots, and nose. Add appendages all over made of yarn or roving cotton stapled or glued on. A tongue and teeth can be added for interest. (See diagram)

SCRIPT:

(Jamie Germ slinks his way on stage, making mumbling sounds)

Germ: Rats! It's awful being a germ. No friends. Always sneaking around looking for something to jump on and spoil. It's been a tough week.

(Looks up and notices children)

Germ: Oh, my goodness. I did't know you were here. Where are we?

(Children answer the Germ)

Germ: I know who you are! But (sigh), I bet you don't know who I am. No body around here seems to know who I am. Can you guess?

(Children try to guess)

Germ: I'm Jamie the Germ. I'm slimy and sneaky. My friends are all over this place. My friends and I love to spoil food and make it smell bad. When people smell food that is rotten their noses crinkle up and they usually say "Yuk". That's when we're the happiest.

Have you ever smelled a food that makes you go "Yuk"?

(Children respond)

Germ: My favorite food to spoil is hamburger. I can make it get slimy and smelly. Of course milk is fun to spoil, too. I can make it get thick and smell sour. (Disgustedly) But you know what, boys and girls? People don't like me at all.

I guess you've heard about refrigerators, haven't you?

(Children nod and say yes)

Germ: Refrigerators are so cold that I can't stand it in there. Whenever I see boys and girls put food in the refrigerator I know I can 't make it spoil. How do you expect a germ to live in a place as cold as the North Pole? Do you think you would like to live inside a refrigerator?

(Children shake heads and say no)

Germ: Neither would I. And another place I can't stand is inside of shiny metal cans. Why, there's no air to breathe and I can't even get inside them unless they have been opened.

(Discouraged) Between cold refrigerators and those darned cans a germ can hardly spoil any food.

Germ: I'm going to disappear in a minute. I'm going to look around the room for some food that is left out. Maybe it will even be uncovered. Hooray for spoiled food!

(Looking all around the room and at children)

Do you have a nice ham sandwich I can spoil? Then if some-body eats it they might get sick. Maybe I can find some milk to turn sour.

Maybe I'll go to your house and look for food on the counters. I'll be back at school, though. I may come to school on a piece of fruit that hasn't been washed. Oh boy. I can hardly wait! Do you want me to come back to spoil you food?

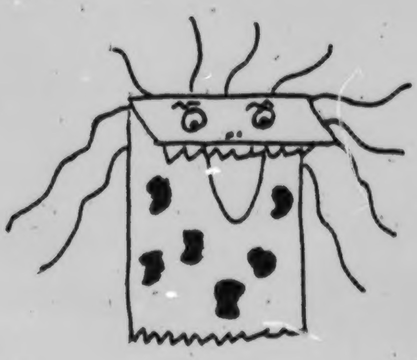
(Children shake heads and say no)

Germ: You boys and girls are pretty smart. Probably too smart for me. (Sadly)

I guess if you wash your hands before you eat and put foods in the refrigerator, I won't be seeing you. I'm going out to find some boys and girls who aren't as smart as you are. I'll get in their food and make them sick. (Eerily) Goodbye!

(Children say goodbye, boo, etc)

(PUPPET EXITS)



JAMIE GERM PUPPET

EATING FOR THREE GOOD REASONS

Behavorial Objective: The student will state that we need food for growth, energy and health.

Process Objective: Interpreting data, identifying and explaining items of information, determining cause and effect relationships.

Teacher Information: Eating fills three basic physical needs - growth, energy, and health - Eating also fills emotional and social needs. This group of activities relates to the physical needs for food.

- -

Materials: "Dandelion: The Lion Who Lost His Roar" (booklet attached)
Foods for tasting, if desired.
Student worksheet: "Who Needs More Food"

- -

Vocabulary: live, energy, growth, health

Motivation:

Read the story of "Dandelion: The Lion Who Lost His Roar," or show the filmstrip "You and Your Food", listed under additional resources to illustrate that food is necessary for health, energy and growth. Follow with a discussion of the ways boys and girls know they are growing and different ways they use energy.
(Clothes don't fit, running, etc.)

Development:

1. GROWTH: Children can show that they know that food is one of the things that has helped them to grow by starting out in a crouch and "Growing" a little bit if the teacher calls out the name of a food, finally standing up tall.
(Acceptable answers to grow on: meat, orange, cheese any food name. Unacceptable answers to "Grow On": car, dirt, plate, crayon, etc.)

2. ENERGY: Have children do jumping jacks and other exercises. Discuss what they need to do this exercise for and where they get this energy (from food). In the discussion compare the food we eat to gasoline in a car. They both give energy to run. When the car runs out of gas, it won't go and if we run out of food energy, we won't have energy to go either.

   Discuss activities that take very little energy: sleeping, sitting, resting, and lots of energy: running, bike riding.

3. HEALTH: Have children draw a picture of two children - one who eats the right kinds of foods and one who eats just sweets. Have children describe how the children in the pictures feel and what they are that made them feel that way.

   Have each child fill out "Who Needs More Food" , Student worksheet.

Evaluation:

Ask each child to write or state three ways food helps our body - (Acceptable answers - to grow, get energy, stay healthy).

Additional Activities:

1. Have a "Grow-Go-Glow" food tasting party. Be sure to discuss each food selected which helps us to either grow, go, or glow (stay healthy). Foods to use could be bread or crackers for energy, peanut butter for growth, celery sticks for health.
2. To illustrate growth have children draw a picture of a living thing in three stages; tiny, medium and full size. It could be an imaginary creature or a real animal. Each child can tell the class a story about the character, and what it ate to grow and be healthy.
3. Make a class display of large body outlines of children on butcher paper. Have children cut pictures of food from magazines or draw food pictures inside the torsos to show healthy foods.

Additional Resources:

Filmstrips: "You and Your Food" from You and Your Health; Walt Disney Project SNAC - (7 mins.)

Books: Food Helps Him Grow, Yakima Home Economics Association, 1975 Illustrated with brief text (Project SNAC)

Everybody Has a House and Everybody Eats, by Green, Mary, Addison

Wesley Publishing Company, Inc. 1961 (Project SNAC).

Two early science concepts illustrated with great pictures and colors. It discusses what animals eat and where they live.

The Growing Story by Krauss, Ruth; Scholastic Book Services: New York.

Story of a child who wants to know if he is growing.

DANDELION

the lion who lost his roar

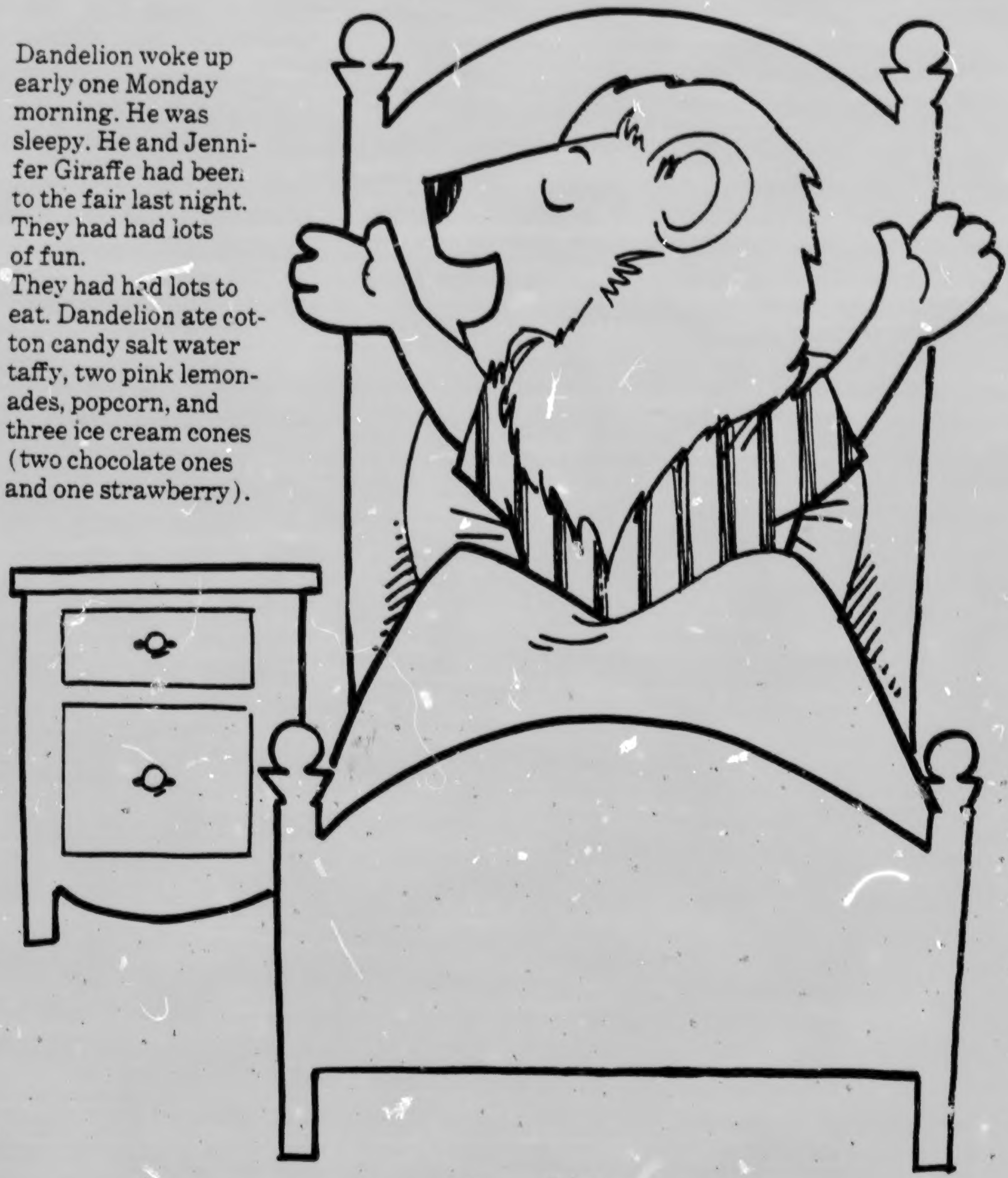
by Rose Stoia

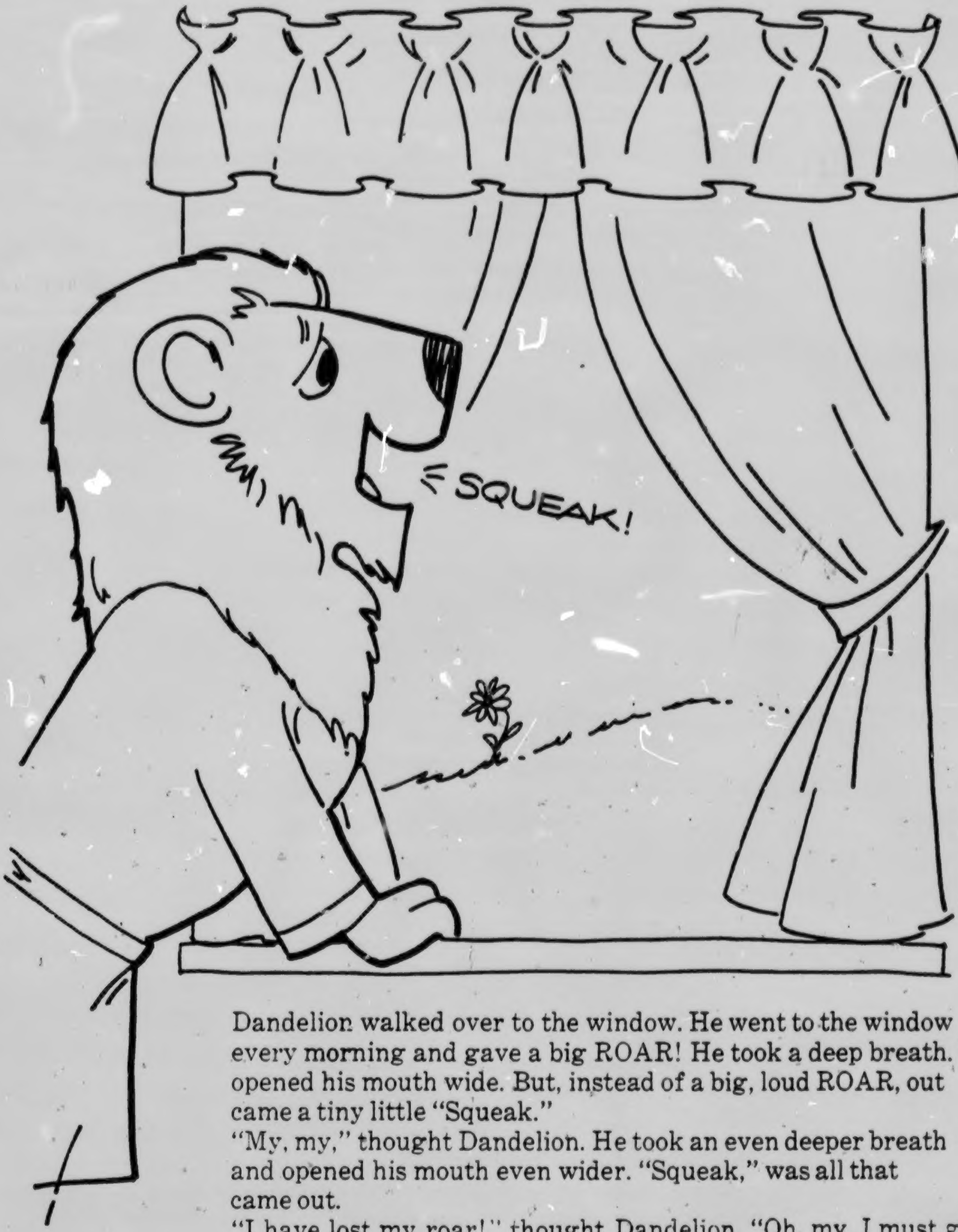
12114

San Mateo City Schools, CA Dept. of Ed.

Dandelion woke up early one Monday morning. He was sleepy. He and Jennifer Giraffe had been to the fair last night. They had had lots of fun.

They had had lots to eat. Dandelion ate cotton candy salt water taffy, two pink lemonades, popcorn, and three ice cream cones (two chocolate ones and one strawberry).





Dandelion walked over to the window. He went to the window every morning and gave a big ROAR! He took a deep breath. He opened his mouth wide. But, instead of a big, loud ROAR, out came a tiny little "Squeak."

"My, my," thought Dandelion. He took an even deeper breath and opened his mouth even wider. "Squeak," was all that came out.

"I have lost my roar!" thought Dandelion. "Oh, my. I must go see Dr. Kangaroo."

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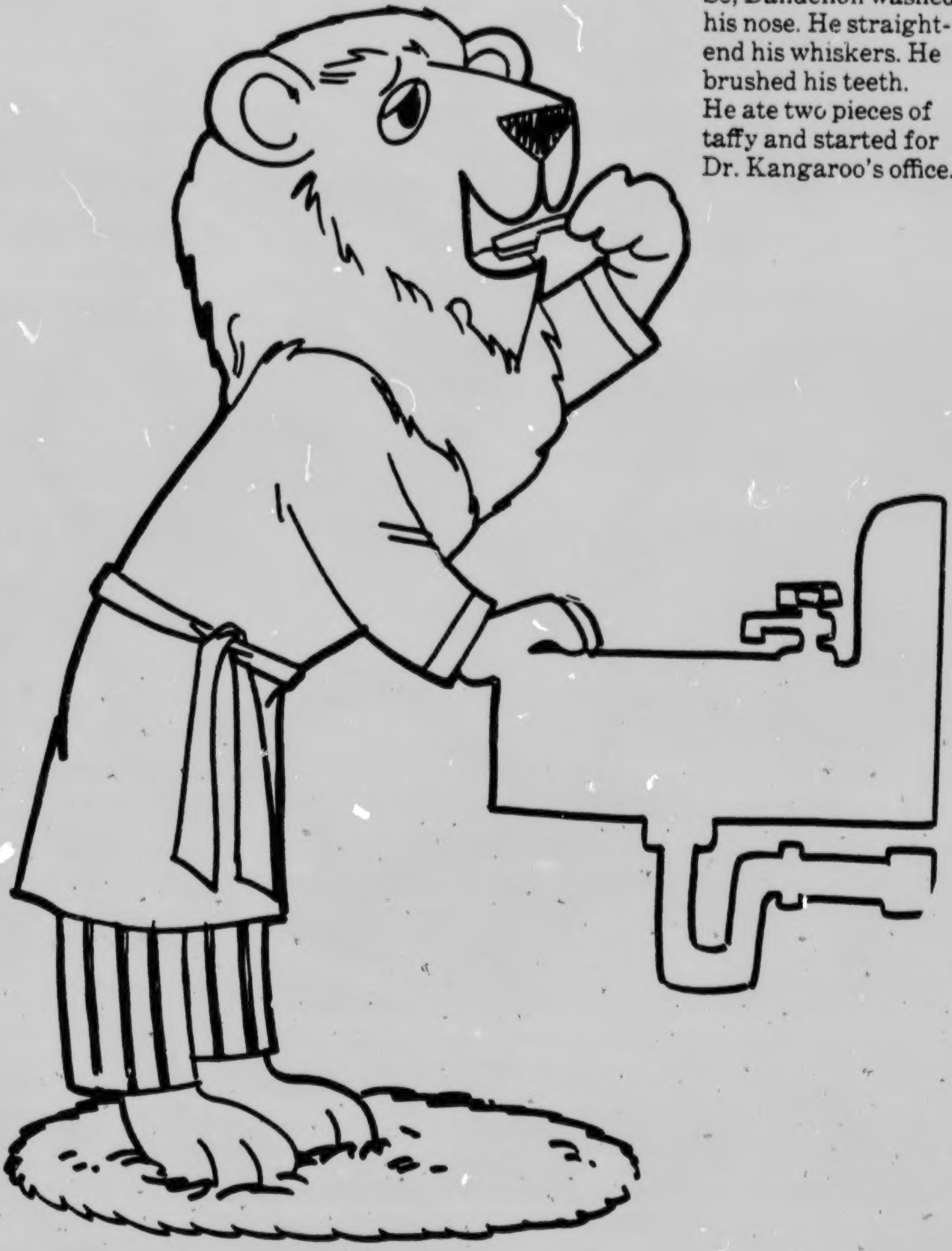
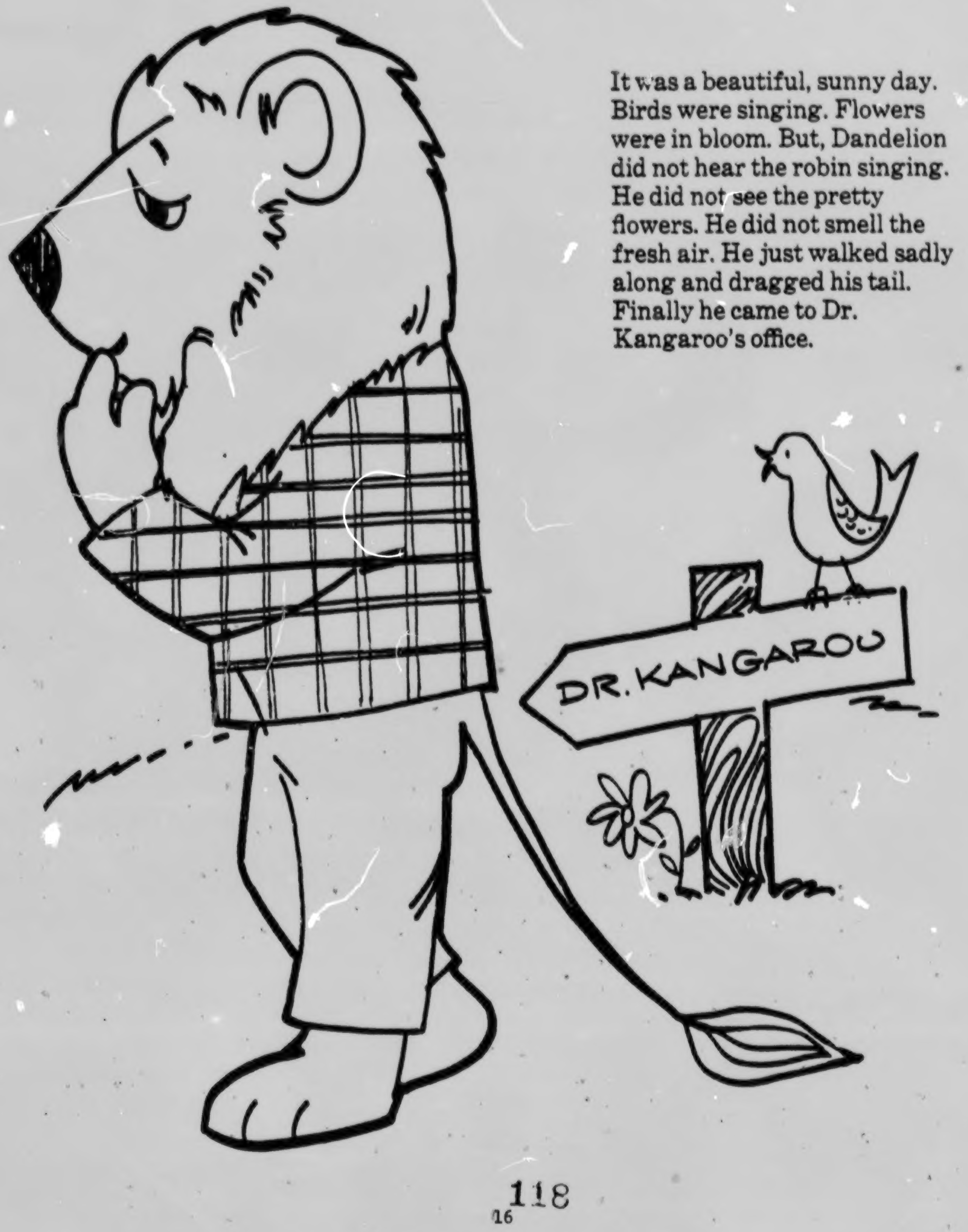
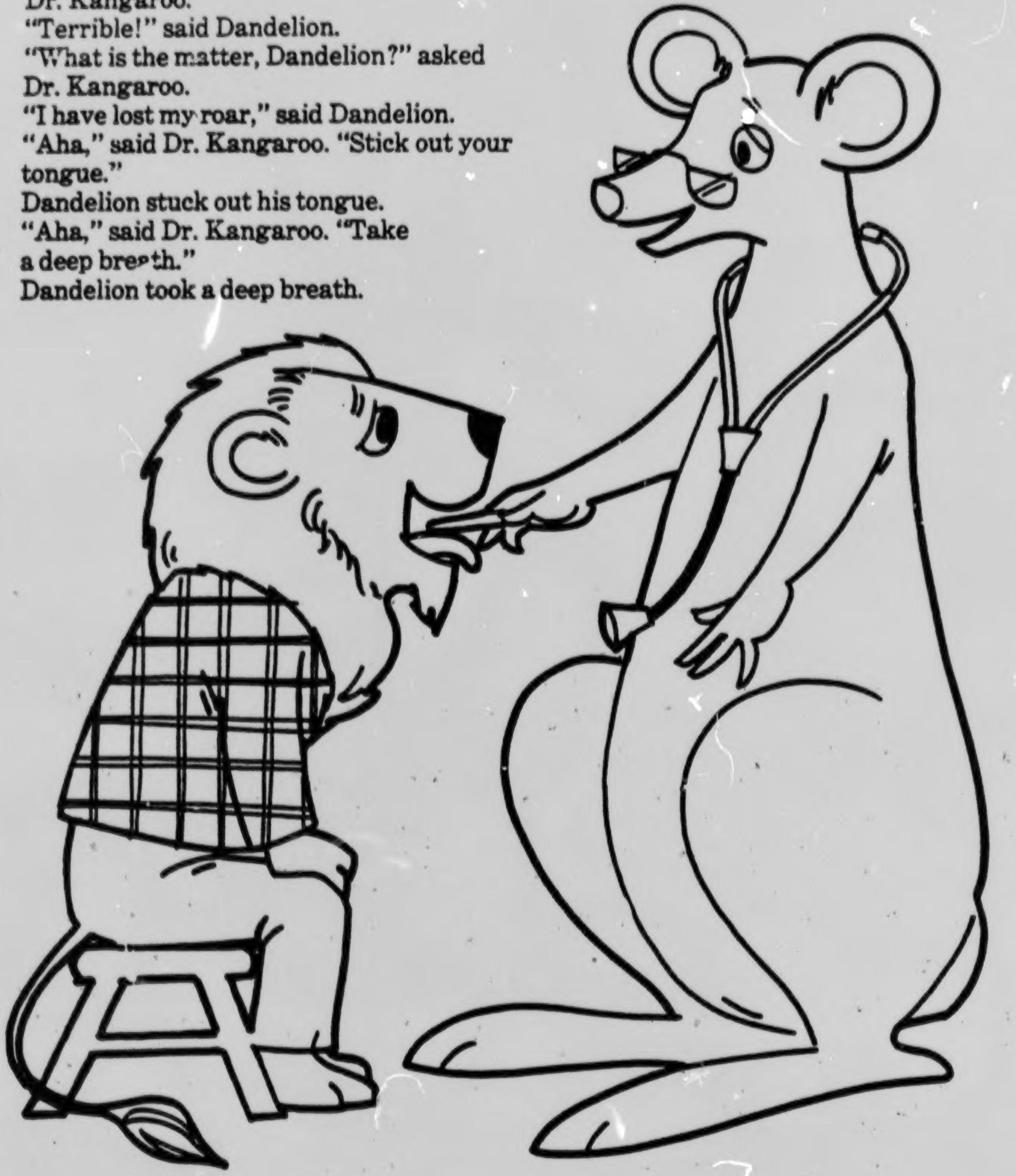
So, Dandelion washed his nose. He straightend his whiskers. He brushed his teeth. He ate two pieces of taffy and started for Dr. Kangaroo's office.

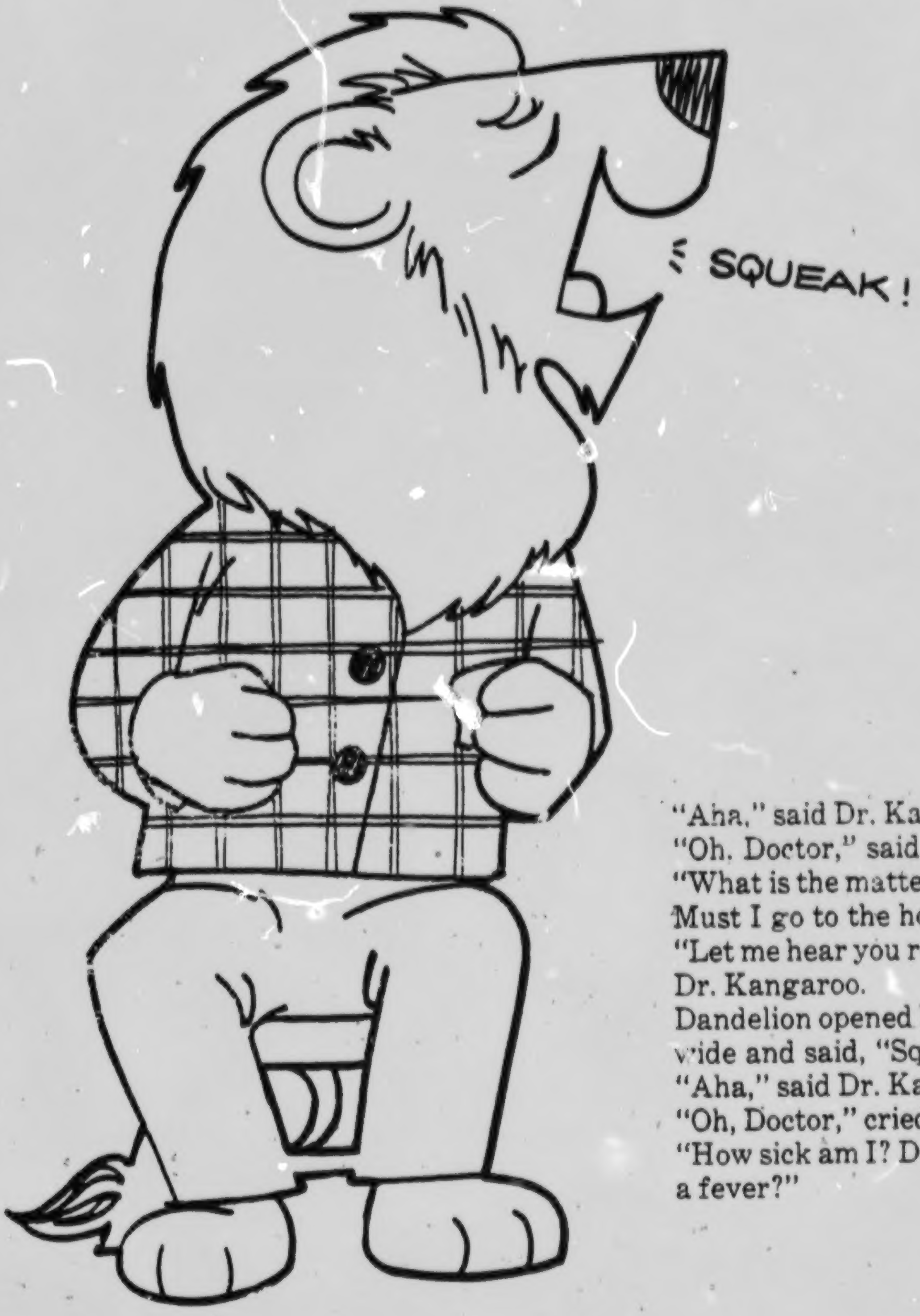




It was a beautiful, sunny day. Birds were singing. Flowers were in bloom. But, Dandelion did not hear the robin singing. He did not see the pretty flowers. He did not smell the fresh air. He just walked sadly along and dragged his tail. Finally he came to Dr. Kangaroo's office.

"Hello, Dandelion," said Dr. Kangaroo.
"Hello, Doctor," said Dandelion.
"How are you today, Dandelion?" asked Dr. Kangaroo.
"Terrible!" said Dandelion.
"What is the matter, Dandelion?" asked Dr. Kangaroo.
"I have lost my roar," said Dandelion.
"Aha," said Dr. Kangaroo. "Stick out your tongue."
Dandelion stuck out his tongue.
"Aha," said Dr. Kangaroo. "Take a deep breath."
Dandelion took a deep breath.





"Aha," said Dr. Kangaroo.
"Oh. Doctor," said Dandelion.
"What is the matter? Am I sick
Must I go to the hospital?"
"Let me hear you roar," said
Dr. Kangaroo.
Dandelion opened his mouth
wide and said, "Squeak."
"Aha," said Dr. Kangaroo.
"Oh, Doctor," cried Dandelion.
"How sick am I? Do I have
a fever?"

"Dandelion, what did you have to eat yesterday?" asked Dr. Kangaroo.

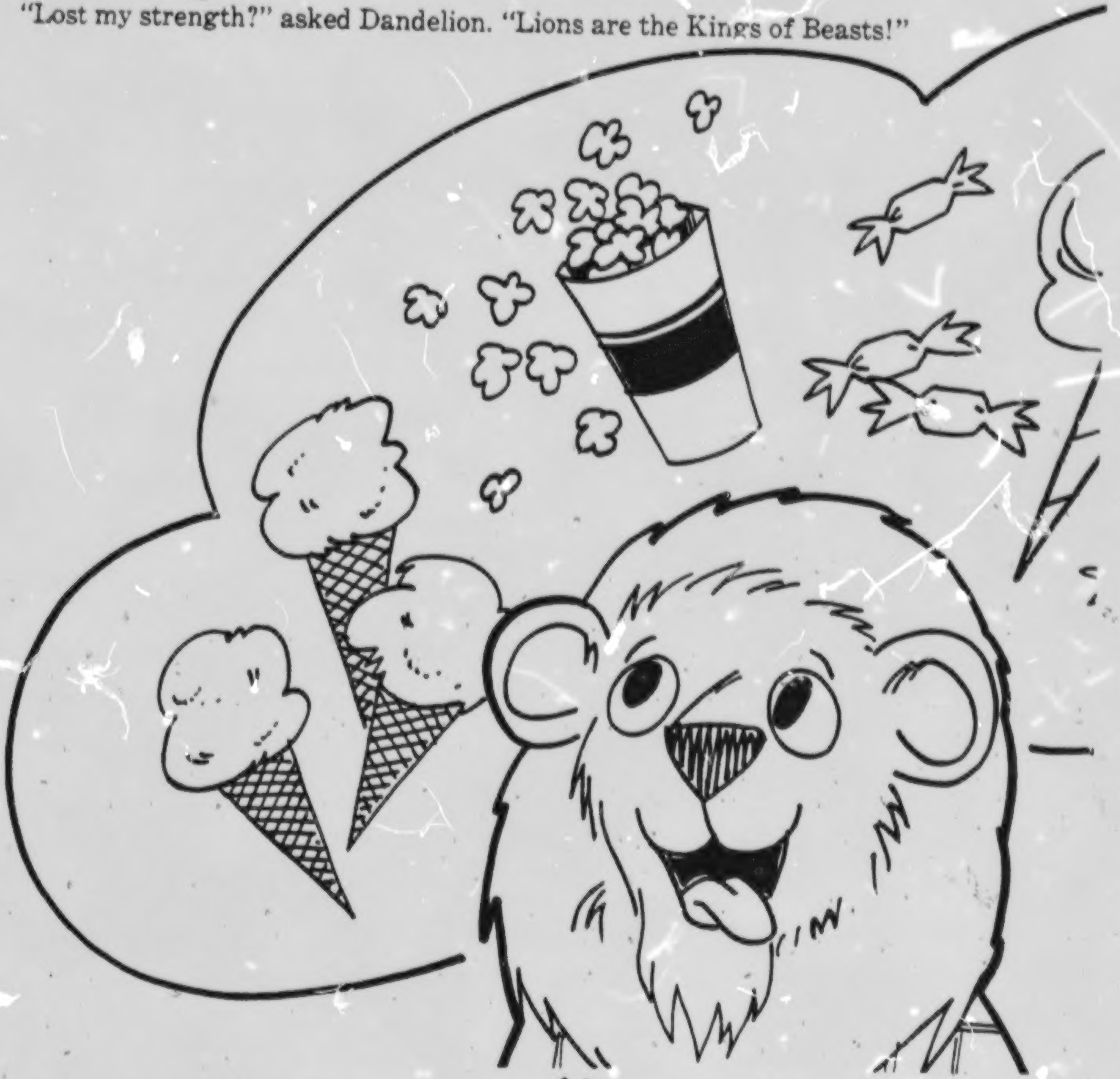
"Lots of good things," said Dandelion. "I had three ice cream cones (two chocolate and one strawberry), two pink lemonades, popcorn, cotton candy and salt water taffy."

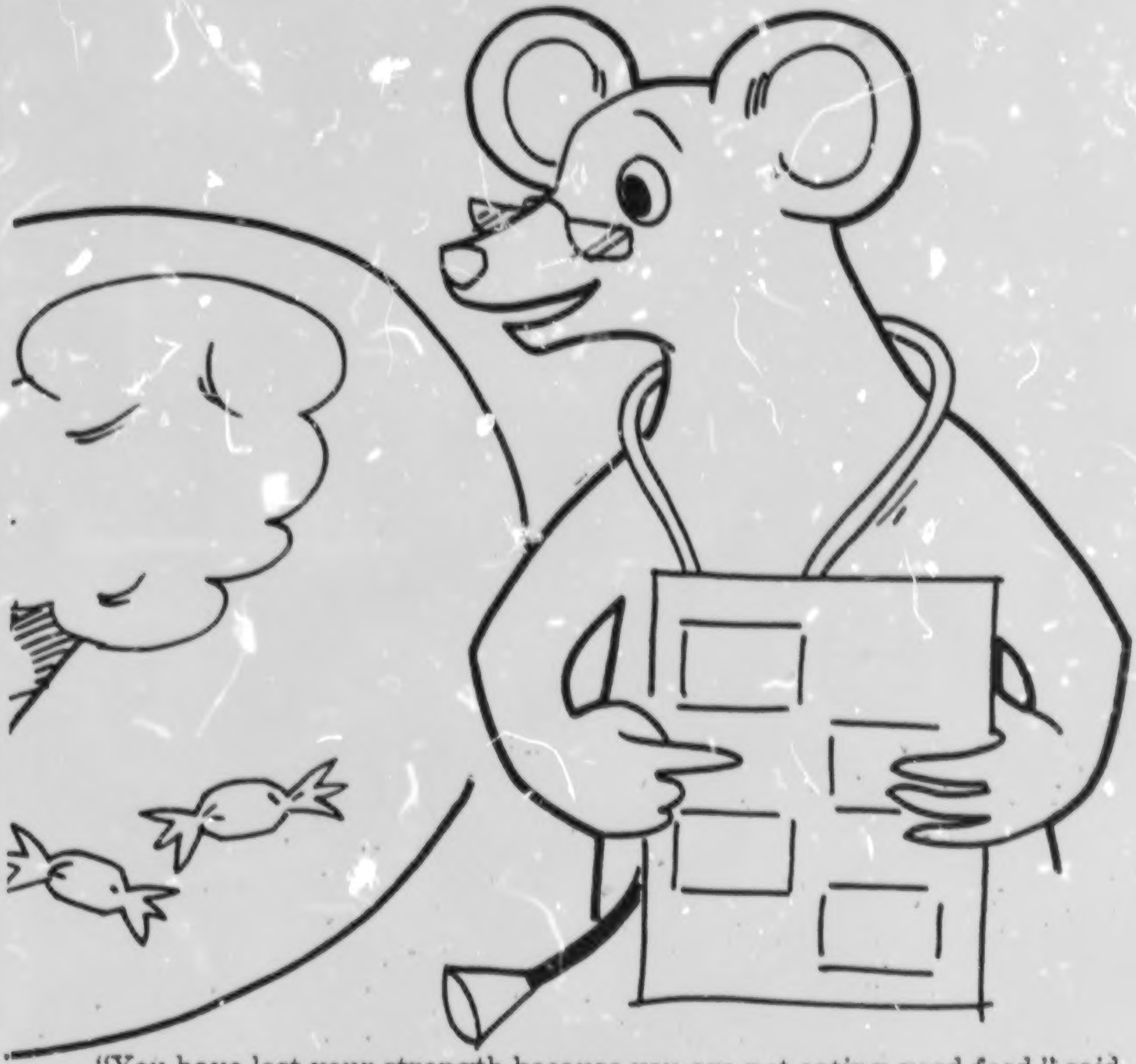
"Aha," said Dr. Kangaroo. "And what did you have for breakfast today, Dandelion?"

"Two pieces of salt water taffy," said Dandelion.

"Aha," said Dr. Kangaroo. "Dandelion, you have lost your roar because you have lost your strength."

"Lost my strength?" asked Dandelion. "Lions are the Kings of Beasts!"





"You have lost your strength because you are not eating good food," said Dr. Kangaroo.

"But Dr. Kangaroo," said Dandelion. "Cotton candy is good. Taffy is good."

"Yes, Dandelion," said Dr. Kangaroo. "Cotton candy and taffy are good tasting, but they are not good food to build strong bodies."

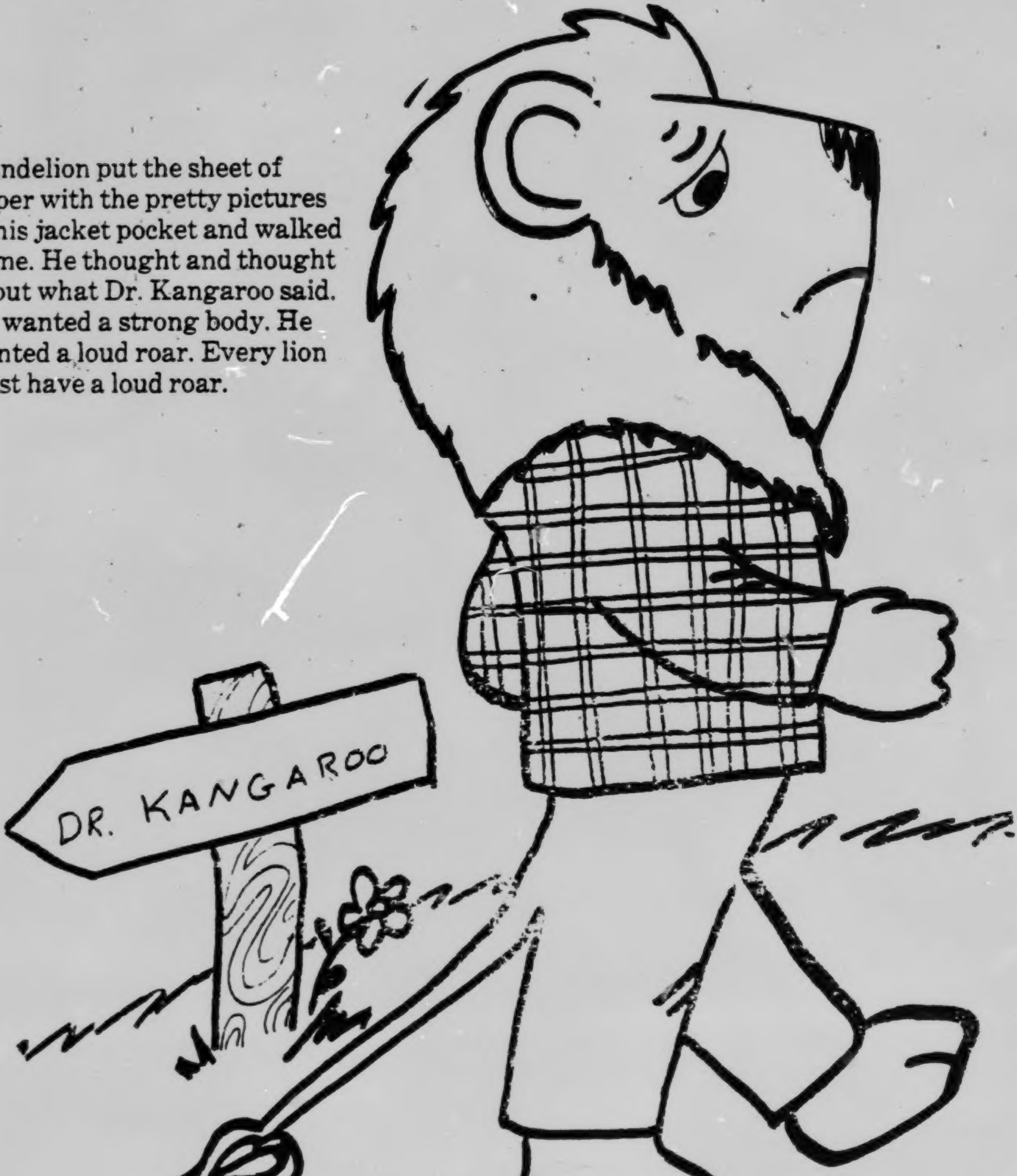
"Oh," said Dandelion thoughtfully.

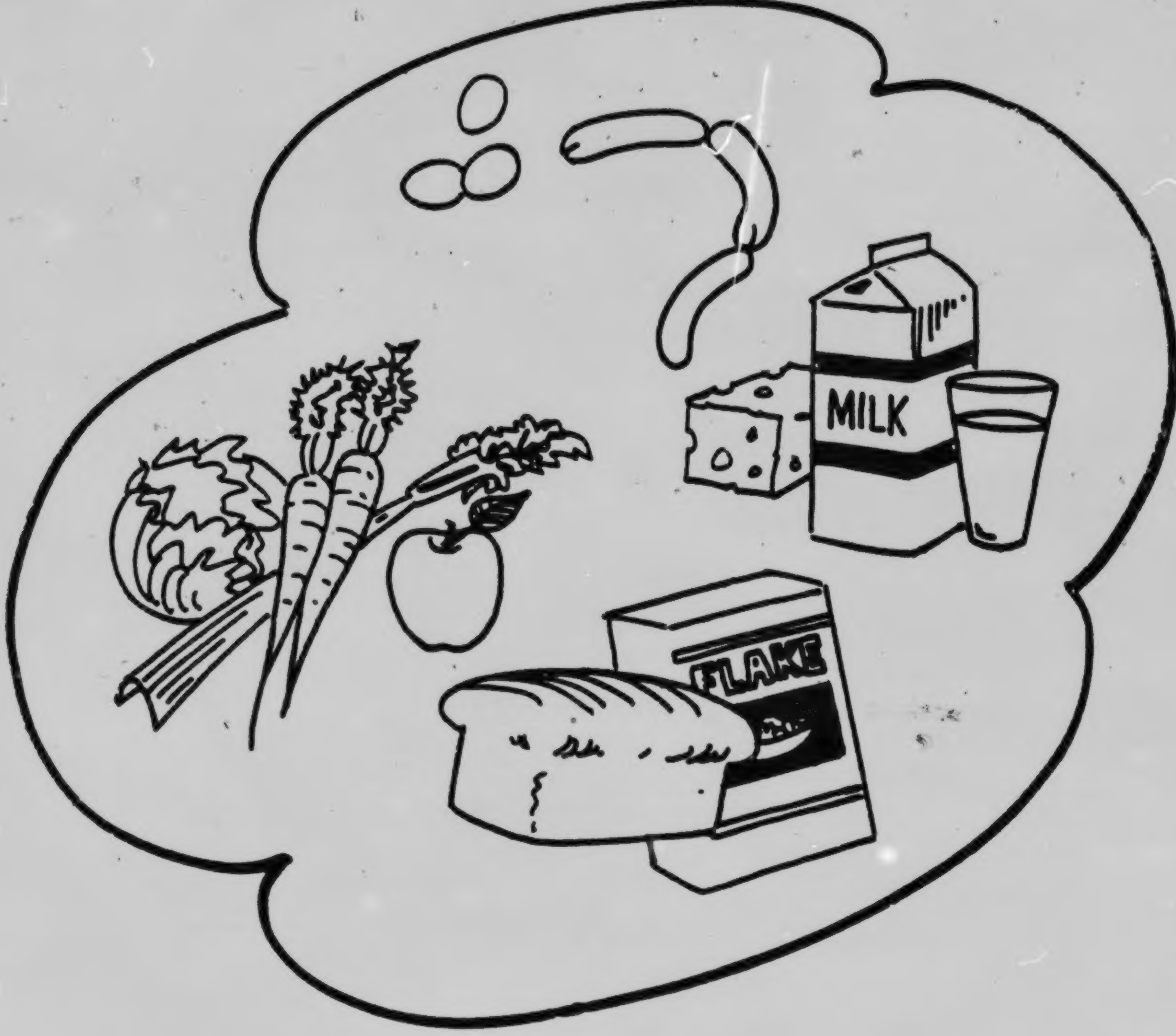
"Here is a paper, Dandelion," said Dr. Kangaroo, "that shows you what foods *will* build a strong body."

"Oh," said Dandelion again.

"You eat the foods listed here everyday, Dandelion," said Dr. Kangaroo, "and come back and see me in one month."

Dandelion put the sheet of paper with the pretty pictures in his jacket pocket and walked home. He thought and thought about what Dr. Kangaroo said. He wanted a strong body. He wanted a loud roar. Every lion must have a loud roar.





When Dandelion got home, he read the sheet with the pretty pictures.
"Hum," he thought as he looked at the pretty pictures. "This does not look so bad. It says I should eat four helpings of fruit and vegetables every day. I like apples. I like raw carrots. I like orange juice. I like lettuce. It says I should eat two helpings of protein a day. I like hamburgers. I like eggs. I like hot dogs. It says I should drink four glasses of milk every day. I love milk. It says I should eat four helpings of bread and cereal. I like corn flakes. I like toast. I like macaroni."
So Dandelion ate the good foods listed on the sheet of paper with the pretty pictures.

One month later Dandelion went back to see Dr. Kangaroo. He ran down the street, smiling at everyone he passed.

"Hello, Dandelion," said Dr. Kangaroo.

"Hello, Dr. Kangaroo," said Dandelion.

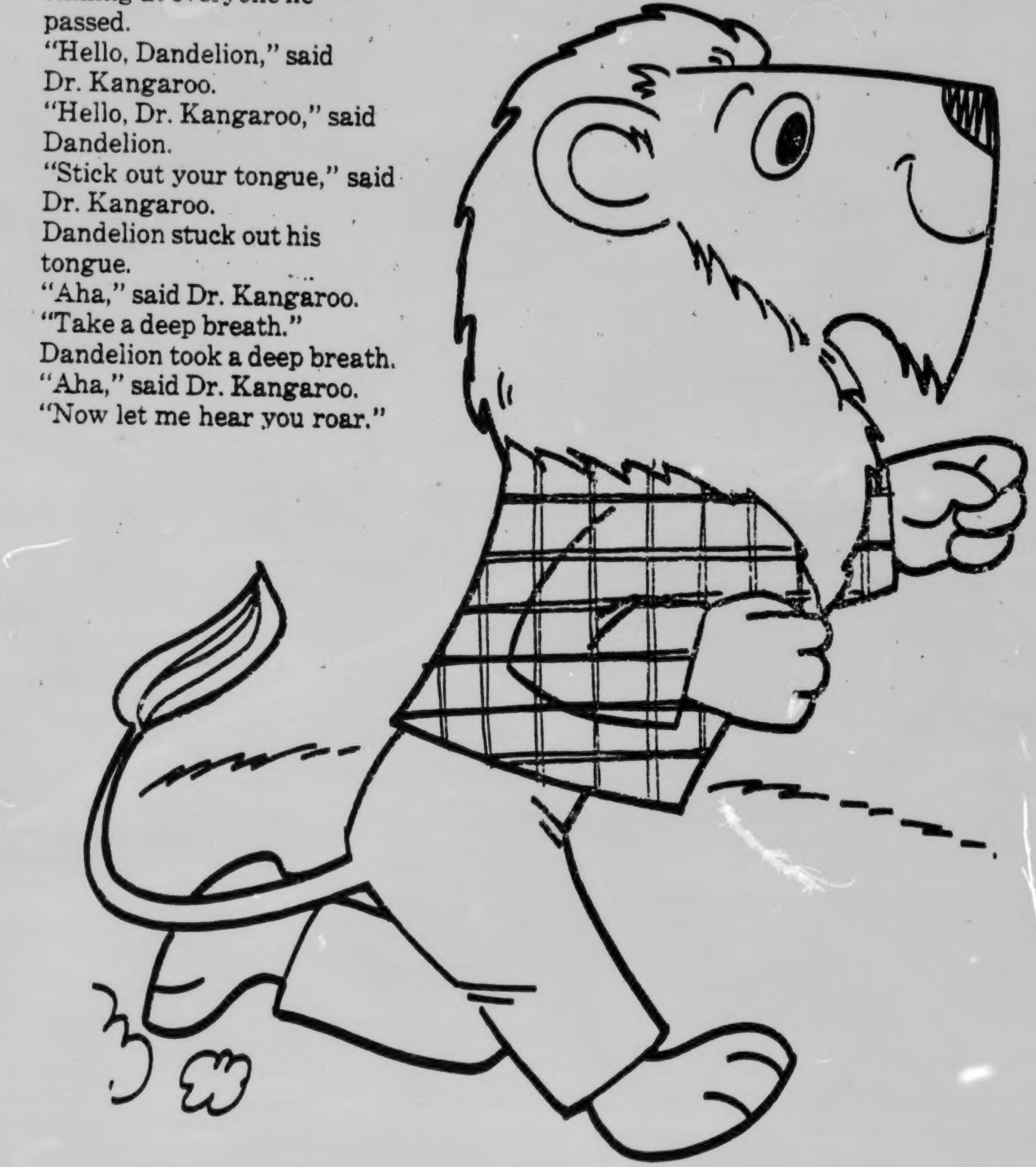
"Stick out your tongue," said Dr. Kangaroo.

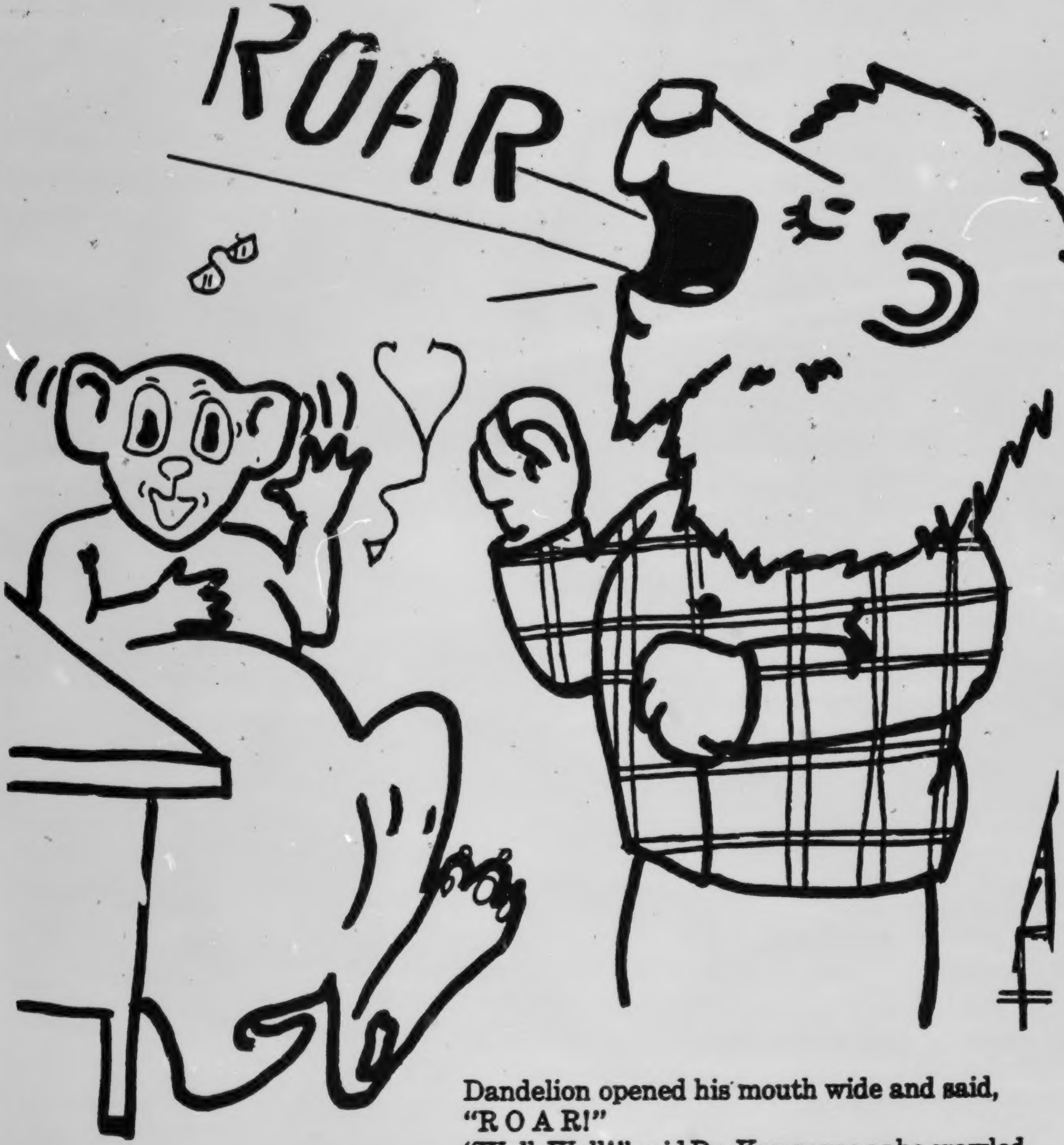
Dandelion stuck out his tongue.

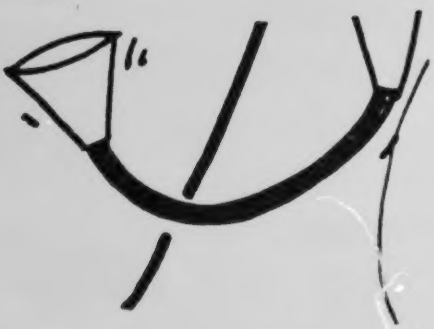
"Aha," said Dr. Kangaroo. "Take a deep breath."

Dandelion took a deep breath.

"Aha," said Dr. Kangaroo. "Now let me hear you roar."



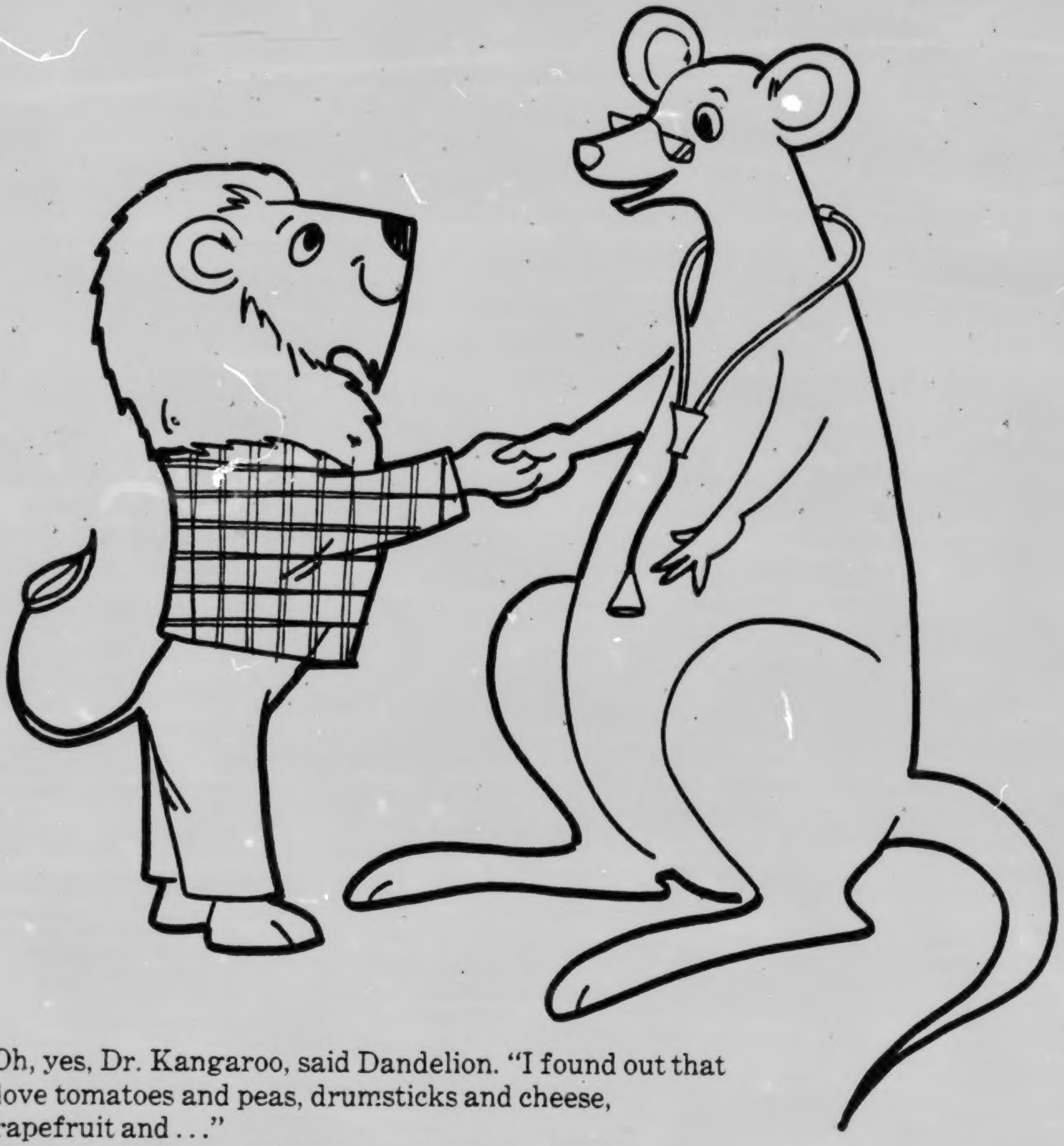




Dandelion opened his mouth wide and said, "R O A R!"

"Well, Well!" said Dr. Kangaroo as he crawled out from under the desk where he had fallen, "I can see that you have been eating like I told you to eat.

"You certainly have gotten your roar back," he said as he picked up his glasses off the floor. "You must have followed the sheet I gave you very carefully," Dr. Kangaroo said as he brushed himself off.



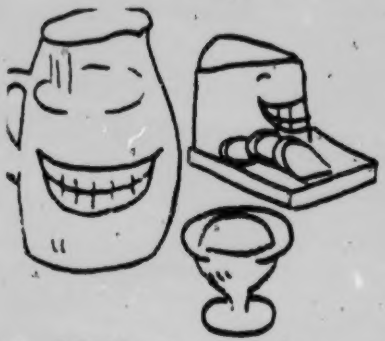
"Oh, yes, Dr. Kangaroo, said Dandelion. "I found out that I love tomatoes and peas, drumsticks and cheese, grapefruit and . . ."

"Hold it, hold it, Dandelion," said Dr. Kangaroo. "I can see that you have learned your lesson well. You have learned to eat the right foods. You are a strong lion. Your roar is strong. You keep eating this way, and you will never lose your roar again."

"I will," said Dandelion. "I will."

And he did.

FOUR FOOD GROUPS

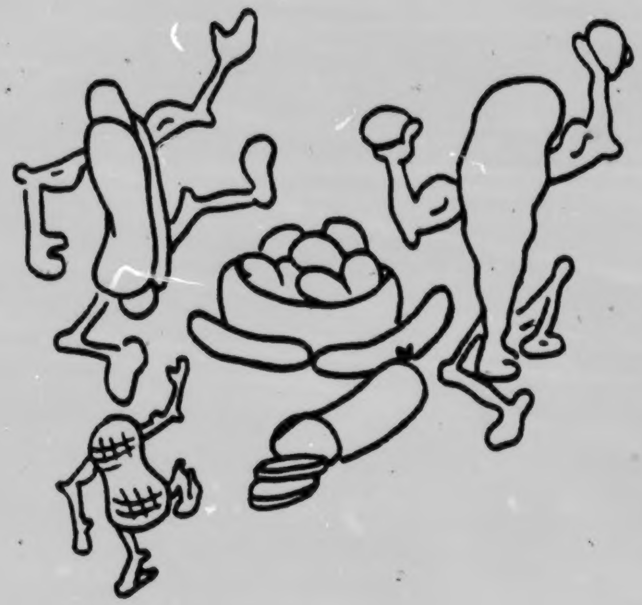


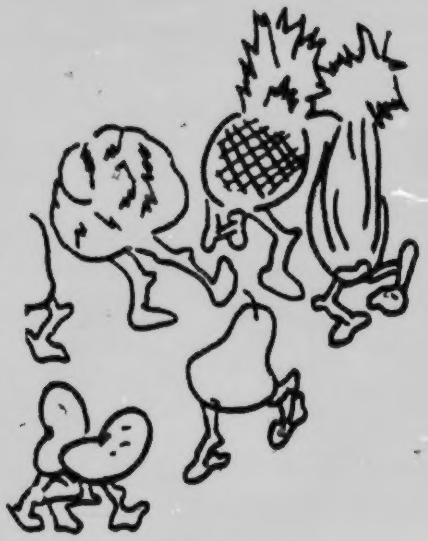
Milk Group

3 or more cups for children
4 or more cups for teenagers
2 or more cups for adults

Protein Group

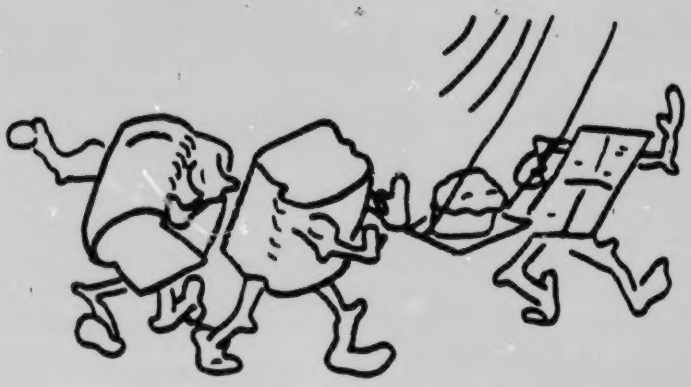
2 or more servings





Fruit and Vegetable Group

4 or more servings



Bread and Cereal Group

4 or more servings

Would you like a paper like Dandelion has so YOU can have a strong body?

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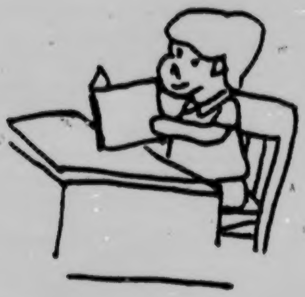
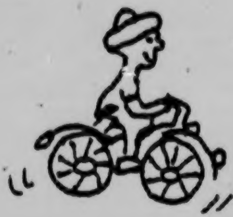
NAME ______________________________

WHO NEEDS MORE FOOD

CIRCLE THE PERSON IN EACH ROW WHO NEEDS MORE FOOD.

1.





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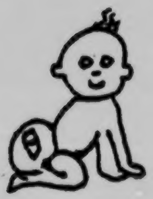

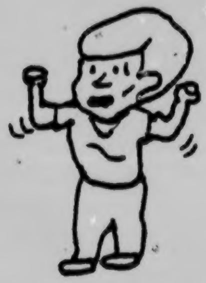

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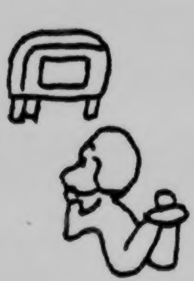

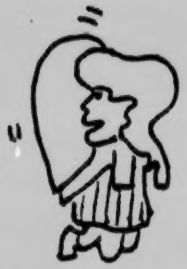

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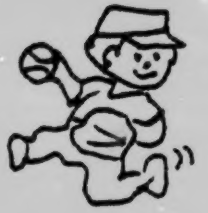
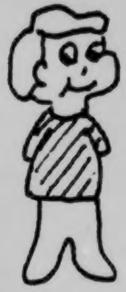




San Mateo City Schools, CA Dept. of Ed.

Concept A

First Grade
Subject Area: Health Science

BE A SMART SNACKER

Behavioral Objective: The student will identify snacks that promote dental health.

Process Objective: Predicting consequences, hypothesizing, relating points, determining cause and effect relationships.

Teacher Information: Snacking between meals is as American as apple pie. Snacks can contribute to the health of an individual or be a replacement for more health-promoting foods. By starting early to stress healthful snacks and backing the concept up with information about how they promote or interfere with a healthy diet, children can begin to see the importance of each food choice. A snack is any food eaten between regular meals.

- -

Materials: Snackology poster, (Project SNAC)
Student worksheets, "Foods Good for Your Teeth", "Circle the Healthy Snacks", "Can You Find the Smart Snacks"; Letter home

- -

Vocabulary: snack, crisp, crunchy, energy, healthy

ACTIVITY

Motivation: Ask students to name their favorite snacks.
Make a list on the board.

Development:

1. What does "snack" mean? (Food we eat in addition to regular meals).
   What kind of snacks do you eat?
   What makes a snack healthy? (crisp, crunchy, full of vitamins)
   What kind of snacks are not healthy? (sticky, gooey, sugary)
   What happens when we eat too many snacks? (we don't eat well at meals)
2. Display the poster of healthy snack foods. Have students name the snacks pictured. Discuss the variety of snacks - refer to the students list on board.
3. Have students complete one of the snack worksheets and/or write a letter home naming healthy snacks tasted or learned about in school.

Evaluation:

Evaluate students comments, responses, and written work for comprehension of concepts presented.

Additional Activities:

1. Help students select one or two simple snacks to prepare or taste in class. Plan for the day by obtaining food and equipment. Select one crisp, crunchy food to clean the teeth (celery) and one snack high in protein and calcium (cheese, milk). Both should be low in sugar. Emphasize through discussion that these snacks are good for the teeth.
2. Show the filmstrip "The Snacking Mouse". Follow with a discussion of what might happen if snacks are not chosen carefully.

   Filmstrip is a cartoon which introduces healthy snacks and the consequences of poor snack choices.

Additional Resources:

Filmstrips: The Snacking Mouse, Polished Apple, Inc. (5 min.)
Project SNAC Library

Your Mouth Speaking - "A Tale of Two Teeth" - (9 min.)
The story of nutrition and its effect on teeth and general health.
(District IMC SFS 611 Cass)

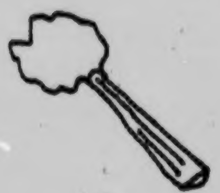
Snackology - Teaching kit available from Raisin Advisory Board, Modesto, California for $1.00
(Includes poster, student handouts, recipes, lesson plans)

Toothtown U.S.A. - National Dairy Council Multimedia learning kit, recommended for intermediate grades. Available from the Dental Auxiliary Kit.

NAME ____________________

FOODS GOOD FOR YOUR HEALTH

CIRCLE THE FOODS THAT ARE GOOD FOR YOUR TEETH.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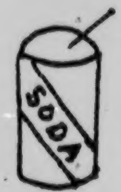
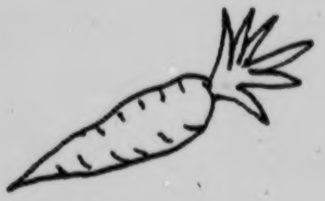


SODA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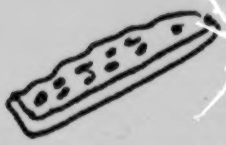
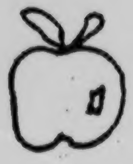
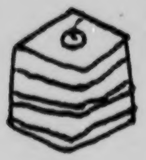
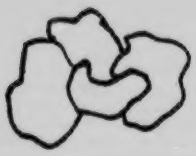
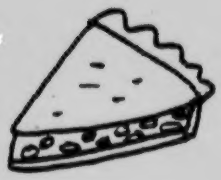
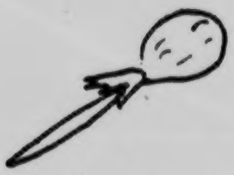

CANDY BAR


APPLE


CAKE


POTATO CHIPS


PIE


LOLLIPOP

CAN YOU NAME THE FOODS THAT HAVE A LOT OF SUGAR?

YOUR DENTIST WANTS YOU TO HAVE HEALTHY TEETH. DO YOU WANT HEALTHY TEETH, TOO?

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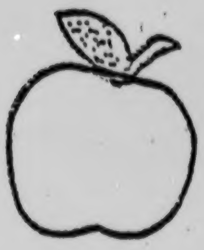
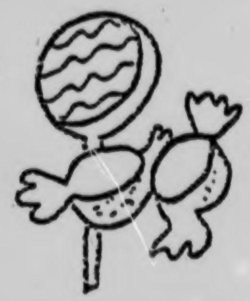
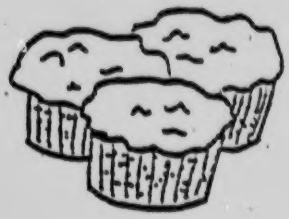
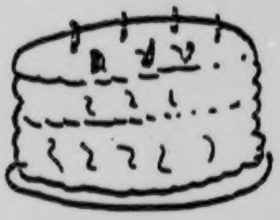
NAME____________________

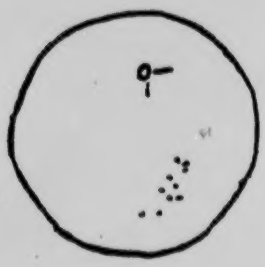
CIRCLE THE HEALTHY SNACKS

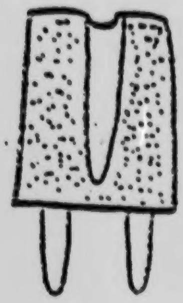


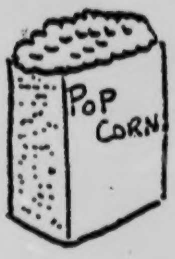


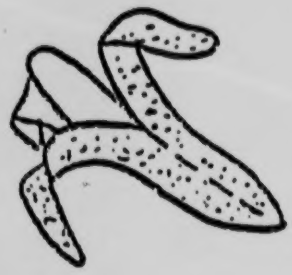


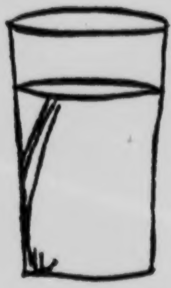












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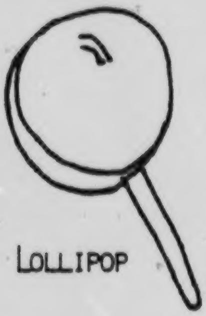
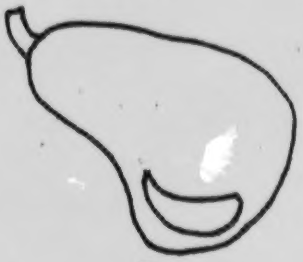
NAME____________________

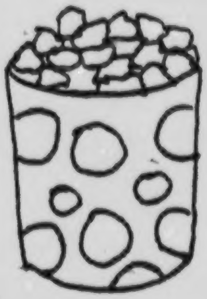
CAN YOU FIND THE SMART SNACKS?

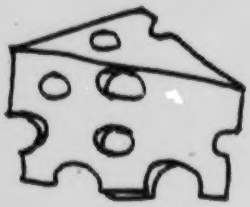
CHILDREN EAT SNACKS LIKE THESE. SOME HAVE A LOT OF SUGAR. CROSS THEM OUT.

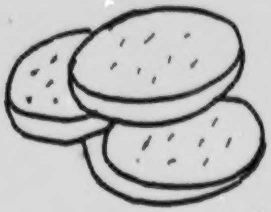
WRITE THE SMART SNACKS AT THE BOTTOM.

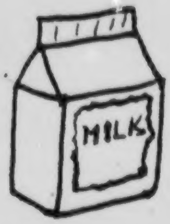

LOLLIPOP


PEAR

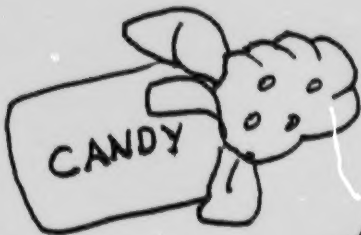

POPCORN


CHEESE

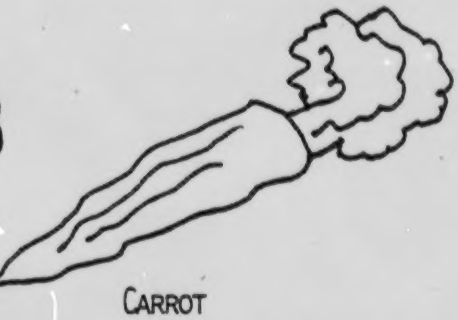

COOKIES

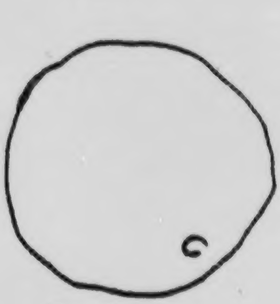


MILK



CANDY BAR


CARROT


ORANGE

WRITE THE SMART SNACKS HERE.

1.____________________ 4.____________________

2.____________________ 5.____________________

3.____________________ 6.____________________

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WRITE A LETTER TO YOUR MOTHER OR FATHER. TELL THEM ABOUT SNACKS THAT ARE GOOD FOR YOUR TEETH.

San Mateo City Schools, CA Dept. of Ed.

Concept C, D

First Grade
Subject Area: Science
Social Studies

MILK AND THE DAIRY FARM

(Food, Farms, and Farmers: Part I)

__Behavioral Objective:__ The student will name an animal that provides milk.
The student will list two foods made from milk.
The student will explain the job of the dairy farmer in providing milk.

__Process Objective:__ Retrieving relevant knowledge, grouping, abstracting.

__Teacher Information:__ This lesson covers the introduction to the farm by tracing the production of milk from farm to the table.

__Materials:__ Filmstrip; "Food Sources" - (8min.) from Food, Fuel and Energy
Q-Ed Productions, 1976 (Project SNAC)
"More Milk, Please" posters (Project SNAC)
My Friend the Cow booklet Lansky, L (Project SNAC)

Food Tasting: small taste of milk, mild cheese and yogurt
paper cups and spoons for tasting.
Student worksheets, "The Cow Gives Us Milk", "All About Milk".

__Vocabulary:__ dairy, cow, milk, cheese, cream, butter, buttermilk, yogurt
calcium

ACTIVITY

__Motivation:__

Read a story or show a filmstrip. The filmstrip listed is a general introduction to farms, including dairies.

__Development:__

1. Following the film or story, display the "More Milk Please" posters out of sequence and have the class rearrange them until the sequence is correct. Discuss the sequence.
2. Taste three milk foods in class - for example; milk, cheese and yogurt. Discuss that these foods are good for strong teeth and bones. Boys and girls should have 3 servings of these kinds of food everyday. Mention that bones need lots of __calcium__ from milk to grow strong and straight.

__Evaluation:__

Ask the students to name an animal that gives us milk, to name two foods made from milk, and to describe things the farmer does to provide milk.

__OR__ Have students complete one of the worksheets.

__Additional Activities:__

1. Churn butter in a blender or a jar. Write the following instructions on the board.
   a. Whip heavy cream in a blender or shake in a jar. Fill the mixer or jar 1/3 full.
   b. Shake or blend until butter separates from buttermilk.
   c. Drain off buttermilk. Taste it!

d. Wash butter by rinsing until rinsewater is clear.
e. Press butter with a spoon to squeeze water out.
f. Add salt if desired.
g. Eat butter on crackers.

2. Have students make a cow collage as an art project. Have students cut pictures of milk foods from magazines to make the collage. (Directions attached).

Additional Resources:

Filmstrips: And This Little Bottle Went to Market SFS 630 set
follows production of bottled milk

Dairy SFS 637 Cassette
Traces milk through all phases from cow through production plant, bottler, to market.

"Milk" from Drama of Food I SFS 630

The Dairy Farm and the Dairy SFS 637 set
A three part sound filmstrip
"Raising Cows on the Farm"
"Growing Things on the Farm"
"Making Cheese at the Dairy"

"Dairy Farm" from Living on a Farm SFS 630

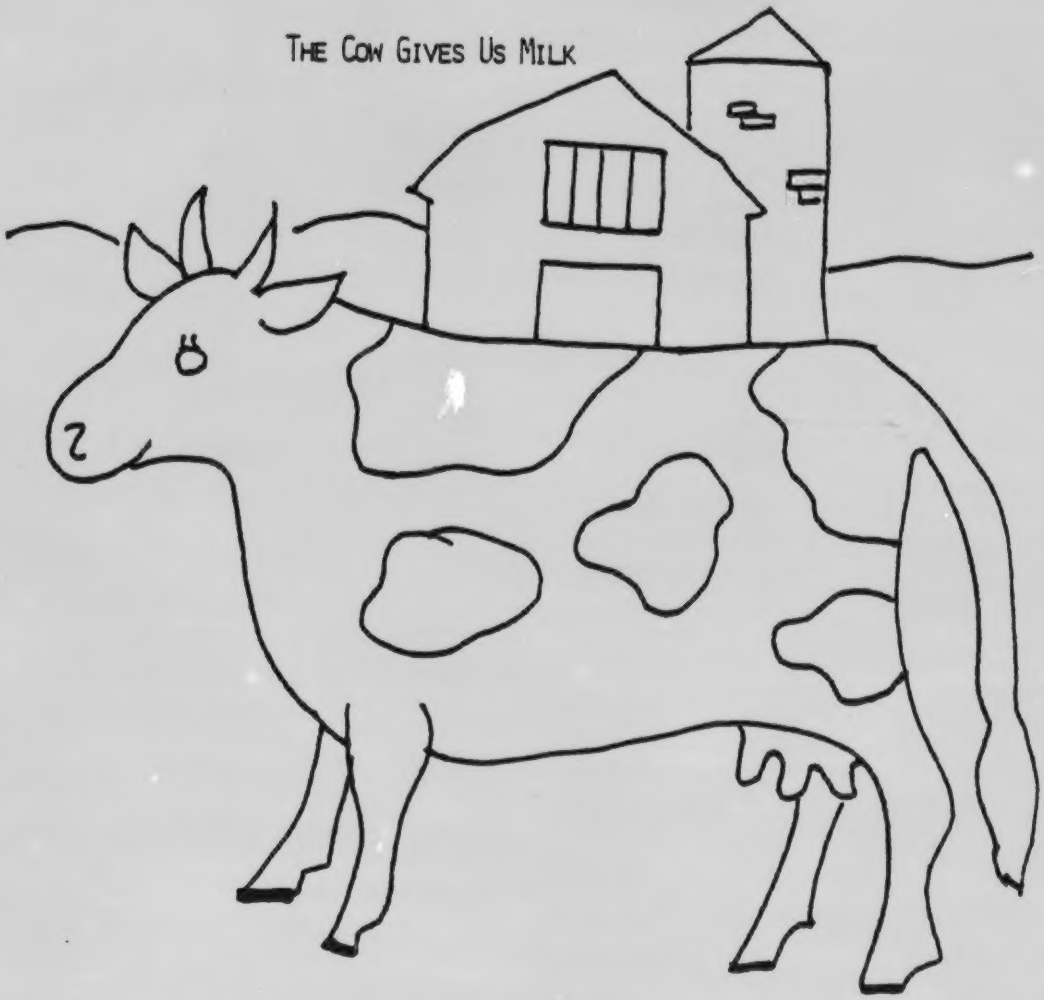
"Dairy Products" from Foods We Eat SFS 641.3

Films: (from SM Co. Media Center)

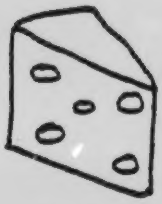
Milk from Farm to You	#454	(2-4)	
Milk	#0378	(k-8)	
They Bring Milk	#3702	(k-6)	
Dairy Farm Today	#0127	(k-4)	
Cow	#0697	(k-2)	Natural sounds, No narration

NAME______________________________

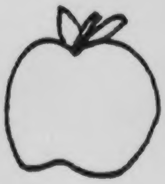
THE COW GIVES US MILK



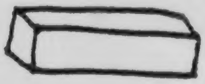
CIRCLE THE FOODS MADE FROM MILK.



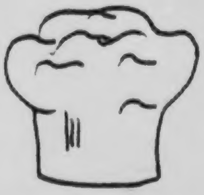
CHEESE



APPLE



BUTTER



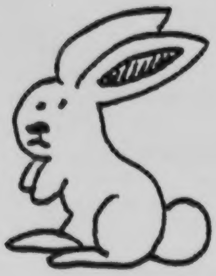
MUFFIN

San Mateo City Schools, CA Dept. of Ed.

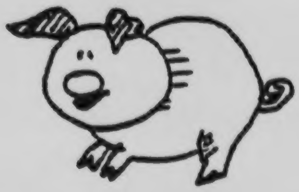
NAME______________________________

ALL ABOUT MILK

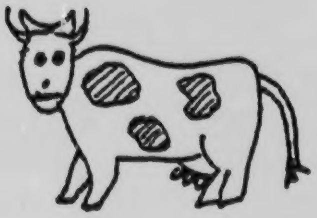
1. WHAT ANIMAL GIVES US MILK?



RABBIT

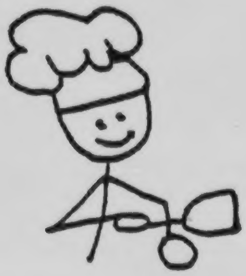


PIG

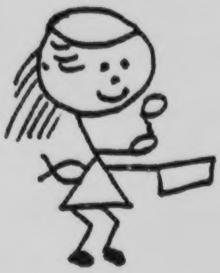


COW

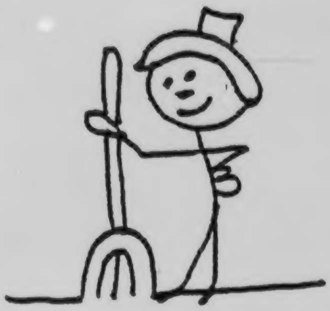
2. WHO MILKS THE COWS?



COOK

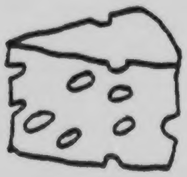


MOTHER

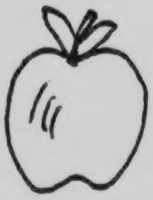


FARMER

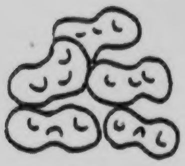
3. WHAT IS MADE FROM MILK?



CHEESE



APPLE



PEANUTS

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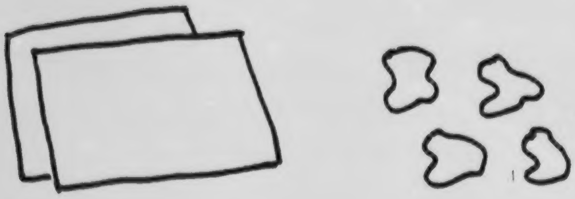
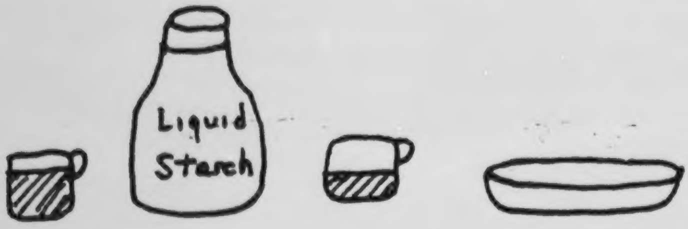
HOW TO MAKE A FOOD SOURCE COLLAGE
K-1

1.



Tear multicolored tissue paper into pieces - medium sized.

2.

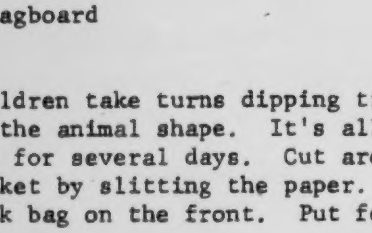


1 C. starch + 1/2 C. water

Aluminum pie tin

Mix water and liquid starch in a flat pie tin.

3.



tagboard

Draw outline of an animal (cow, pig, chicken, turkey) in black marker ink.

4. Children take turns dipping tissue in starch mixture and overlapping the tissue on the animal shape. It's all right if they go outside the lines. Let collage dry for several days. Cut around outline. Mount on heavy board. Make a pocket by slitting the paper. Tape an envelope behind or staple a plastic zip lock bag on the front. Put food pictures of the animal products.

Concept C, D

First Grade
Subject Area: Science
Social Studies

6

WHERE WE GET MEAT AND EGGS

(Food, Farms, and Farmers: Part II)

Behavioral Objective: The student will name one animal which provides meat and one which provides eggs.

Process Objective: Enumeration and listing, differentiation, grouping, identifying common properties, abstracting, categorizing.

Teacher Information: This lesson is to develop the concepts begun in the previous lesson by exploring in greater depth the role of animals as sources of food. If desired, the term "ranch" can be introduced.

- -

Materials: Book - "Farms" - Wonder Books, 1973 (Project SNAC)
Animal Collages with food product pictures (cow, pig, chicken, turkey) (from Project SNAC), or make your own as in Lesson #5.
Students worksheet: "Which Farm Animal".

- -

Vocabulary: pig-pork, cow-beef, chicken-egg, turkey-poultry

ACTIVITY

Motivation: Read the book "Farms" or another introductory farm book to the class. Ask them to share their farm experiences orally.

Development:

1. Discuss the sequence in the production of meats and/or eggs. Discuss people involved in the growing, transportation, and processing of meat and eggs.

MEAT	EGGS
Rancher	Farmer
Cowboys	Egg gatherer
Butcher at Packing Plant	Egg sorter & Inspector
Meat Inspector	Packager (puts in cartons)
Truck Driver to store	Truck Driver
Supermarket } Meat Market } worker	Grocer

2. Borrow from the Project Library or make large tissue paper collages of a cow, pig, chicken, and/or turkey as an art project. Sort food pictures into the appropriate pockets. (Directions in Lesson #5, Page 38)

   Note: Review the milk products the cow provides from the lesson on the dairy.

3. Have students color and complete the worksheet. "Which Farm Animal".

Evaluation:

Has each student completed a matching worksheet which correctly matches animal to product?

Additional Activities:

1. Read the school lunch menu aloud and have students identify foods provided by animals and the animal source. Do the same for bag lunches. Have students describe what their lunch contains.

2. Ask children to draw a mural of animals that provide eggs and meat and to include some of the people involved.

3. Field Trip:

   Visit a local supermarket and see all the different foods in the meat section. Talk to the butcher and find out what kinds of things he does.

4. Food Tasting/Preparation:

   Prepare hard cooked eggs for a class snack. While they are cooking watch the filmstrip "An Egg Farm"; listed below.

Additional Resources:

Book: My Big Book of Farm Animals, Carruth, Jane, Hemlyn Pub. Co., 1973
(Available from Project SNAC)

Filmstrips: (Available from San Mateo City Schools - IMC)

"A Cattle Ranch"	from	Living on a Farm	SFS 630
"You and Pork"	from	Drama of Food II	SFS 630
"You and Beef"	from	Drama of Food II	SFS 630
"You and Poultry"	from	Drama of Food II	SFS 630
"Meat and Poultry"	from	Food We Eat	SFS 6413
"An Egg Farm"	from	Living on a Farm	SFS 630

Modern Methods: Chicken - Egg SFS 636.5 Cassette

Includes "Chicks and How They are Raised"
and
"Eggs and Marketing"

Game: "Farm Lotto"

Film:- San Mateo County Media Center

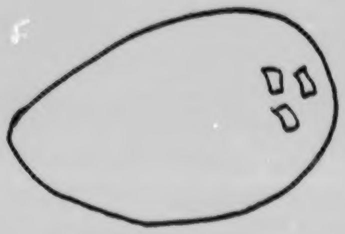
Where does Our Meat Come From?	1 - 3	#0651
A Visit With Farmer Joe	K - 2	#4432, 1975, color 13 minutes

Study Prints: Farm and Ranch Animals SP 636 (IMC)

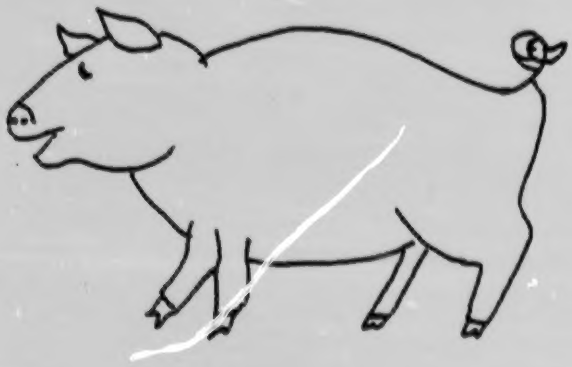
NAME________________________________

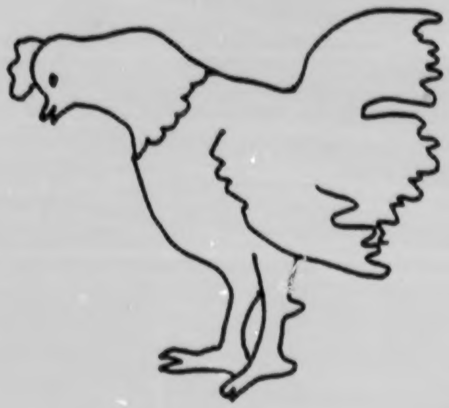
WHICH FARM ANIMAL

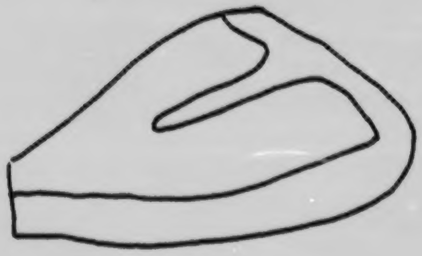
DRAW A LINE FROM THE ANIMAL TO THE FOOD SOURCE.



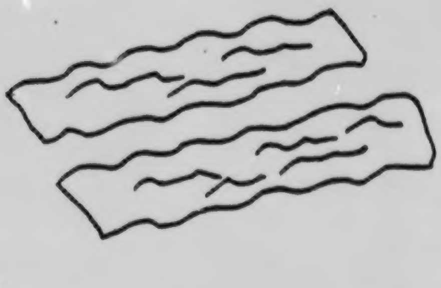
EGG



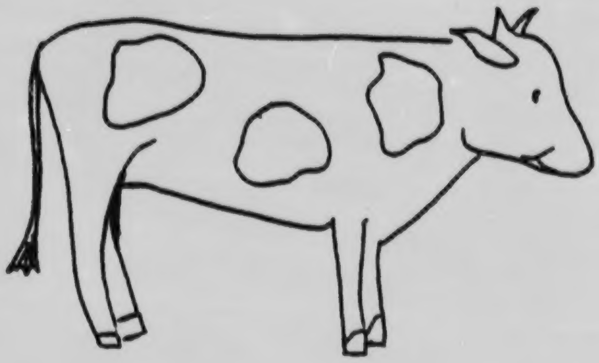




STEAK



BACON



Concept A, C

First Grade
Subject Area: Health
Social Studies

FRUIT AND VEGETABLE FARMS

(Food, Farms, and Farmers: Part III)

Behavioral Objective: The student will identify foods as fruits and vegetables and name specific examples of each.

The student will identify people involved in fruit and vegetable production and transportation.

Process Objective: Enumeration and listing, differentiation, grouping, identifying common properties, abstracting, categorizing.

Teacher Information: This lesson introduces the large categories of fruits and vegetables and the people who grow them. This lesson is preliminary to the more indepth study of plant foods which follow in succeeding lessons.

- -

Materials: Book: "The Great Big Enormous Turnip", Alexei Tolstoy (Project SNAC)
Turnips to taste
Paring Knives
Cutting Board
Student Worksheets: "Today I Tasted", "Circle the Fruits & Vegetables"
Recommended: Vegetable - Fruit Poster Cards from Milton Bradley (Project SNAC)

- -

Vocabulary: fruit, vegetable

ACTIVITY

Motivation:

Recall the types of farms and farm products learned about in the preceeding lessons - dairy farm, egg farm, cattle ranch - and introduce the next type of farm to be studied - Vegetable and fruit farms.

Gather a list of fruits and vegetables from the students. Add a few unusual ones not suggested by the children.

Development

1. Read the book "The Great Big Enormous Turnip", to demonstrate the effort and cooperation it takes to grow and harvest vegetables and fruits of all kinds.

   Follow with a "Turnip Tasting" Party.

TURNIP TASTING

Needed:

5 fairly small turnips (sweeter than large ones)
Bowl of salty ice water or a salt shaker
Paring knives Cutting Board

Adult: Pass the turnip around for all to see, smell, feel. Adult should peel the outside, bitter and tough layer off and cut into slices.

Children with Adult Supervision: Cut a small piece off of a slice, salt and taste.
Have students use descriptive words to describe the color, shape, taste, etc. and complete a "Today I Tasted........." worksheet to take home.

2. Fruit Search: Have children bring a fruit to school. Open the fruit to find the seeds. All fruits have seeds, even bananas. Save the seeds to make a big display with the seeds labeled with the fruit name.
3. Discuss the things a farmer does to grow fruits and vegetables. (Plants seed, waters it, fertilizes or "feeds" it, sprays the bugs or picks them off, picks the fruit and vegetables). Have students act out each step in dramatic play.

Evaluation:

Either:
1) Have each child draw one vegetable and one fruit and a person involved in growing the food.
2) Have student complete the work sheet - "Circle the Fruits and Vegetables".

Additional Activities:

1. Plant vegetable seeds in milk carton planters in a "Farm" corner. Students who take care of the seeds will be "Farmer of the Day". Discuss with class what farmers do to grow big, healthy vegetables.
2. New Vegetables & Fruits: Tasting -

   Have the class decide one fruit and vegetable to taste that is new to most of the students. Plan the tasting session for the period right before lunch. This will increase student interest in trying a new food. (Suggestions; raw cauliflower, raw cabbage wedges, zucchini circles, green pepper; grapefruit (canned sections).
3. My Vegetable - Fruit Book -

   Coloring and categorizing book for individual student use (attached).
4. "Fruit-Vegetable Bingo" Game - (See Lesson 10, Page 57).

Additional Resources:

Books: See My Garden Grow, Moncure, Jane, Child's World: Elgin, Ill., 1976.

A small girl plants, cares for, and harvests vegetables.

Plants Give Us Many Kinds of Food, Moncure, Jane, Children's Press.

Pictures a boy gardening and shows different kinds of plants that give us food and how they are grown.

What is a Fruit?, Day, Jennifer, Golden Press, 1976.

Defines the basic characteristics of fruits and describes each part, beautifully illustrated.

The Carrot and Other Root Vegetables, Selsam, Millicent

The Tomato and Other Fruit Vegetables, Selsam, Millicent

These two books are valuable for the clarity of the pictures, but the text is for grades 5-8.

Study Prints: Vegetable & Fruit Poster Cards - Milton Bradley.

Filmstrips:

(Available from San Mateo City Elementary IMC)

Foods We Eat (SFS 641.3) includes 6 sound filmstrips including one each on vegetables, and fruits

"A Fruit Farm" and "A Vegetable Farm" from Living on a Farm. (SFS 630 set)

NAME______________________________

TODAY I TASTED

TODAY I TASTED A FRUIT.

IT'S NAME IS__________________________________.

HERE IS A PICTURE.

TODAY I TASTED A VEGETABLE.

IT'S NAME IS__________________________________.

HERE IS A PICTURE.

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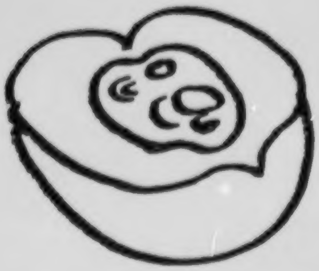
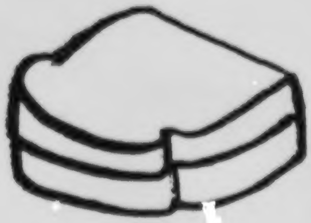
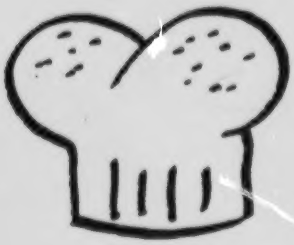
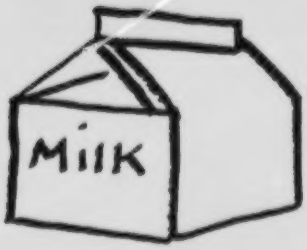
NAME________________________

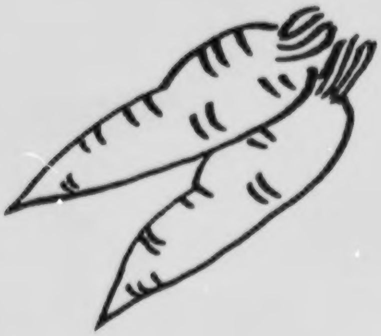
CIRCLE THE FRUITS AND VEGETABLES

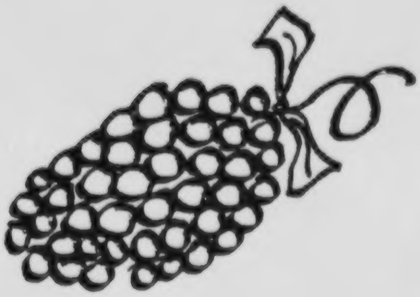


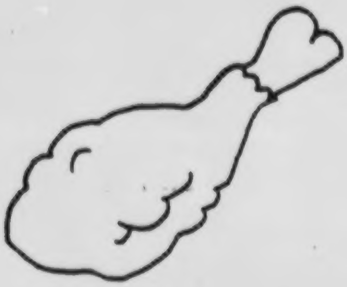


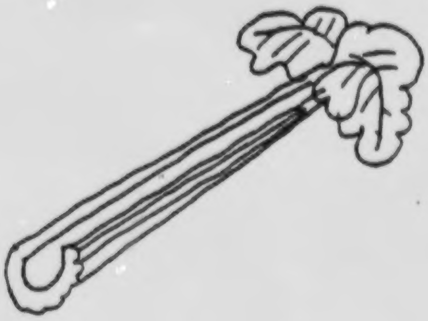








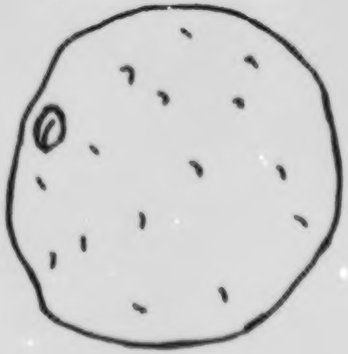


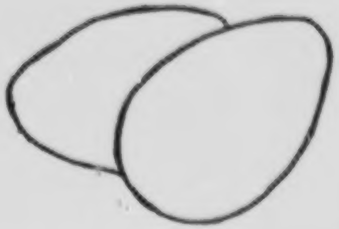


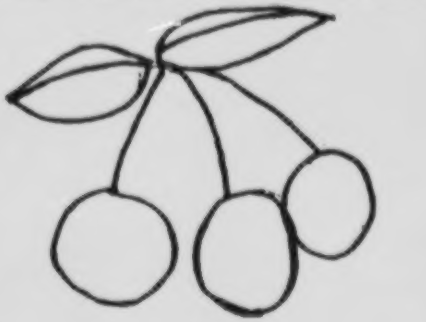
San Mateo City Schools, CA Dept. of Ed.

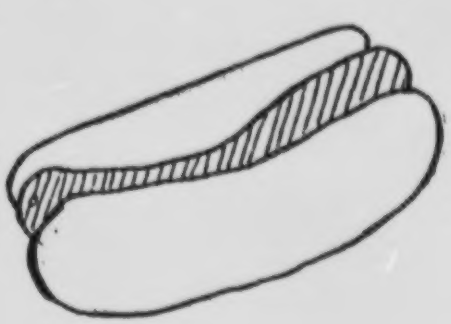
COLOR THE VEGETABLE

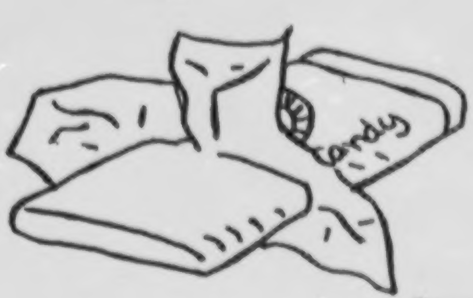
AND FRUIT.

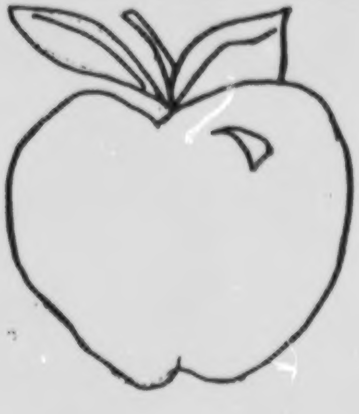


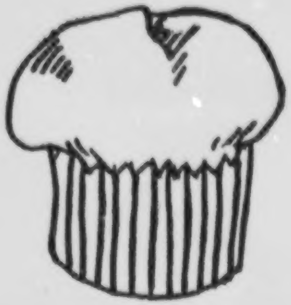


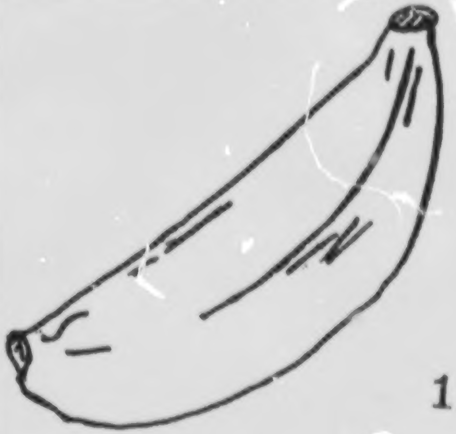












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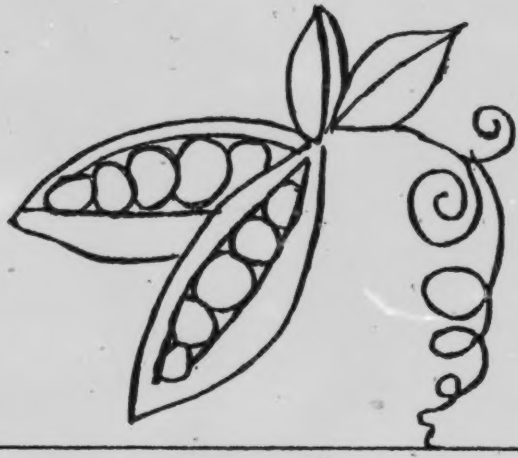
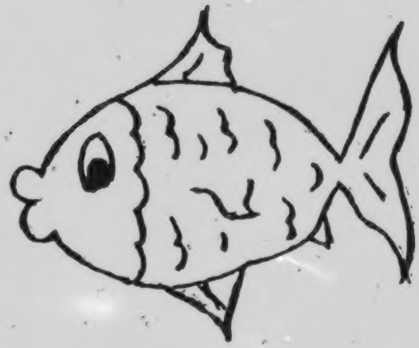
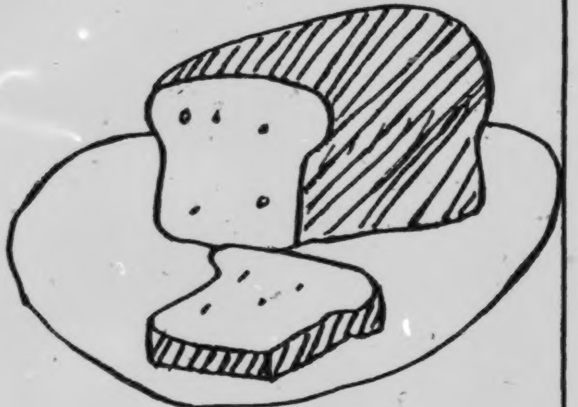
San Mateo City Schools, CA Dept. of Ed.

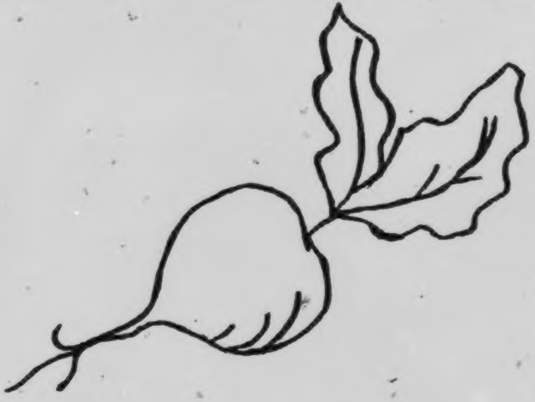
COLOR THE VEGETABLE

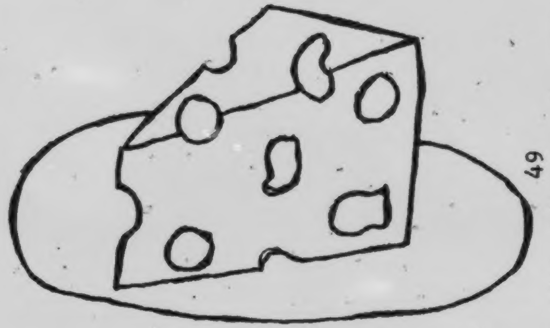
AND FRUIT.

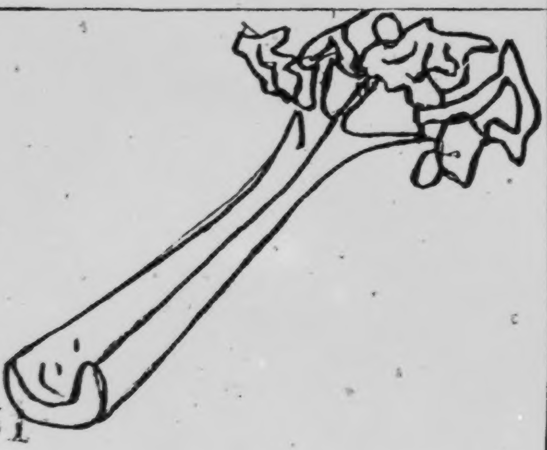


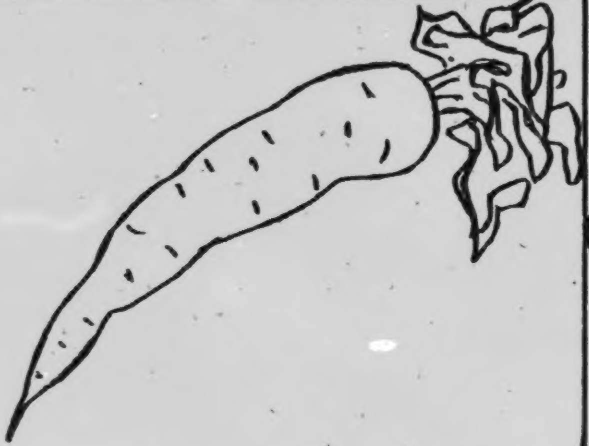


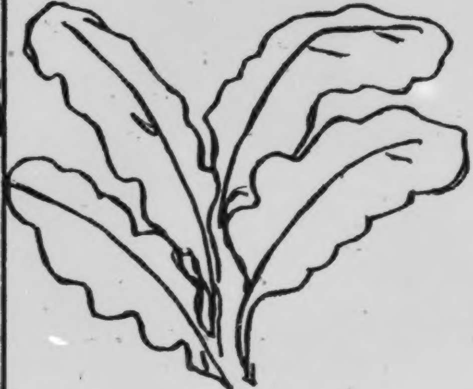












San Mateo City Schools, CA Dept. of Ed.

Concept C, D

First Grade
Subject Area: Science
Social Studies

BREADS AND GRAINS

(Food, Farms, and Farmers: Part IV)

Behavioral Objections: The student will identify grains used for food. The student will identify the baker as a food worker who bakes bread.

Process Objective: Enumeration and listing, differentiation, grouping, categorizing.

- -

Materials:

Wheat on sheaf
Wheat berries, popcorn, rice, corn and oats
White flour
Student Worksheet: "Foods from Wheat"
White bread
Wheat bread
Blender
The Bread Song (attached)

- -

Vocabulary: grain, wheat, rice, corn, oats, grind, bake

Motivation:

Show the Wheat on the Sheaf to the class and discuss its name, where it grows (on a farm), what kind of food it is (a grain). Take a wheat berry (seed) out and let the students see it. (Teacher's note: Grains are the seeds of tall grasses).

Development:

1. Display the grain samples: (wheat berries, rice, corn, oats) and discuss their names and similarities, and differences in size, shape, appearance.

   Explain that each of these "grains" grows at the top of a tall "stalk" which dries out. The seeds or grains are collected by big machines on the farm and are sent to the factory to be packaged.

2. Grind some wheat berries (about1/4 cup) in the blender at high speed to make whole wheat flour. Let students feel and smell the flour. Compare whole wheat flour to white flour and discuss differences and similarities.

   Discussion Points:

   Are whole wheat flour and white wheat flour made from the same grain? (Yes - Wheat).

   Why do they look different? (The factory removes the brown outer shell before grinding the wheat so the flour is very white.

   What is made with Wheat Flour?

   Bread, either whole wheat or white
   Biscuits
   Rolls
   Muffins
   Pancakes
   Cereal (Wheaties)
   Crackers (Wheat Thins, Triscuits)

3. Have students taste and compare the color and flavor of white and whole wheat bread.
4. Sing the Bread Song - (attached) - as a Class.
5. Have students complete worksheet - "Foods from Wheat".

Evaluation:

Evaluate students comments, responses, questions and written work for comprehension of concepts presented.

Additional Activities:

1. INDIANS:

   Use a mortar and pestle to let children grind some wheat berries. Discuss that the American and Mexican Indians and other people without machines grind grains this way. (Available from IMC)

2. OATS:

   Compare oatberries and oatmeal, (rolled oats). Explain that the oatberries are flattened by big stone or steel rollers to make oatmeal. Prepare oatmeal in class for students to taste.

3. RICE:

   Prepare cooked rice in class. Compare raw with cooked. Invite a parent to demonstrate the special rice dish of a particular culture. (Mexican-Spanish rice, Chinese-fried rice, Japanese-steamed rice.

4. Prepare pancakes as a Class Project.
5. Tour a local bakery or invite a baker to explain how bread is baked.
6. Prepare individual biscuits in class as a Cooking Project, using a biscuit mix.

Additional Resources:

Filmstrips:	"Wheat" from	Drama of Food	IMC - SFS 630
	"The Bakery"		IMC - SFS 301
	"Grains" from	Foods We Eat	IMC - SFS 641.3
	"Baking"		IMC - SFS 301
Study Prints:	"Bakery"	SP 301	(12 prints)

THE BREAD SONG

A SONG ABOUT CAREERS IN THE BREAD INDUSTRY FOR GROUP OR CLASS
SUNG TO THE TUNE OF FARMER IN THE DELL. LASTS ABOUT TEN MINUTES

The farmer picks the wheat,
The farmer picks the wheat
Hi, ho, the dairy oh,
The farmer picks the wheat.

(Optional verse between 1st and 2nd)
The miller grinds the wheat,
The miller grinds the wheat,
Hi, ho, the dairy oh,
The miller grinds the wheat.

The baker bakes the bread,
The baker bakes the bread,
Hi, ho, the dairy, oh,
The farmer bakes the bread.

The truck driver delivers the bread,
The truck driver delivers the bread,
Hi, ho, the dairy oh,
The truck driver delivers the bread.

The storekeeper stacks the bread,
The storekeeper stacks the bread,
Hi, ho, the dairy oh,
The storekeeper stacks the bread.

Parents buy the bread,
Parents buy the bread,
Hi, ho, the dairy oh,
Parents buy the bread.

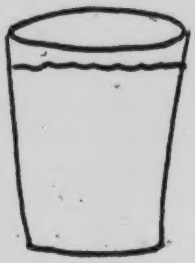
We all eat the bread,
We all eat the bread,
Hi, ho, the dairy oh,
We all eat the bread.

(Nutrition Education Day Care Project, Contra Costa County Health Dept.)

NAME ____________________

FOODS FROM WHEAT

CIRCLE THE FOODS MADE FROM WHEAT.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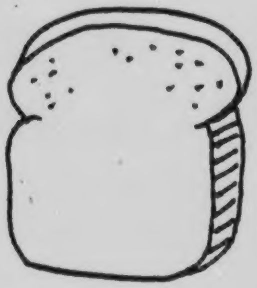
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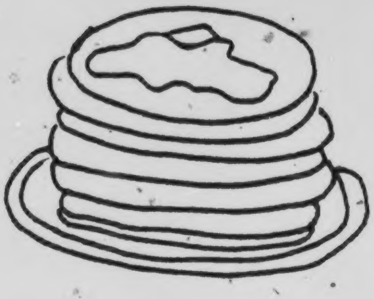
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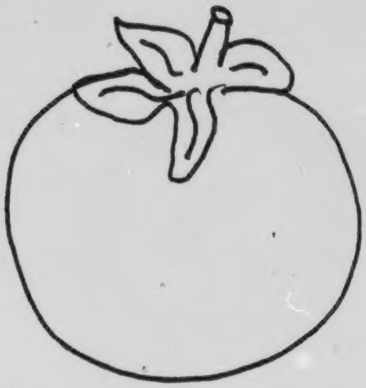
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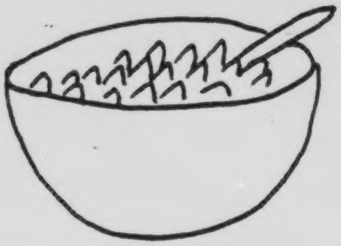
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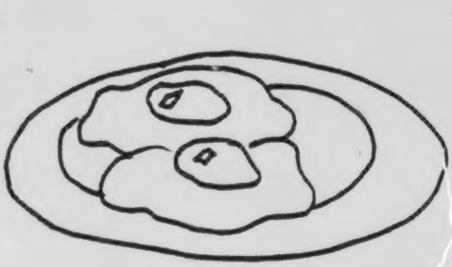

EGGS

San Mateo City Schools, CA Dept. of Ed.

Concept C, E

First Grade
Subject Area: Science

9

SOMETHING'S FISHY

Behavioral Objective: Student will identify tuna as one type of fish.

Process Objective: Fluency in creating alternatives, active curiosity about the social world, differenciation.

Teacher Information: This lesson relates to fish we eat rather than fish as pets. Therefore the concept of fish as pets is not encouraged here. Fish are a good source of protein for muscles. Because fish is available in many forms it is ideal as an introduction to food processing and preservation.

- -

Materials: Book: "Tuna Fish Sandwiches" (Project SNAC)

Food: 2 large cans of tuna
Approx. 3/4 cup mayonnaise
1 box of crackers

Can opener
bowl
spreading knife
fork

- -

Vocabulary: fish, tuna fish

Motivation:

Ask the students to name a type of fish they have eaten. How many have never eaten fish?

Development:

1. Introduce the story "Tuna Fish Sandwiches", by explaining that they will hear about tuna fish sandwiches from start to finish.
2. Read "Tuna Fish Sandwiches".

   Follow with a discussion:

   Where do fish live?
   Name a fish we eat.
   Who catches fish?
   How can we buy tuna fish at the store?
3. Prepare Tuna Fish Salad on crackers as a class project.
4. Read the following story-poem and follow with discussion questions.

SEASHORE SUNDAY

It was Sunday at the seashore
And the sun was shining just once more!

Stevie stuck his foot in the sand
And washed the waves over his hand.

Stevie wasn't fond of ham,
So he reached down and grabbed a clam.
Just as the clam's shell went slam!

Amy saw the clam shell slam.
She had a sneaky little plan.

Amy gave the clam a whallop,
And then she saw in a shell a scallop.

Stevie and Amy grabbed a crab
Boy, did that crab try to grab!

Amy said "Stevie, look at that shrimp!
I do believe it is beginning to limp."

So, boys and girls, if you want something delicious,
That's what clams, and crabs, and fish is!

Follow the poem with these questions:

a. What foods did Stevie and Amy find at the seashore?
b. What is another name we have for all of these foods?
 (seafoods, fish)
c. Have you ever eaten any of these foods?

Evaluation:

Ask the following questions. Correct incorrect responses as they are given but do not tell the correct answer until all students have had a chance to respond.

1. Where do fish live?
2. Name one fish we eat?
3. How are fish obtained for food?
4. How is fish preserved so that it can be kept and eaten later?

Additional Activities:

1. Food Preservation: Have students taste dried Japanese fish or smoked fish as used in Eskimo and Scandinavian Countries. (A very little goes a long way).

2. Field Trip: Tour a local fish market and ask for a description of all the fish, shellfish available. Talk to the butcher about ways to fix some of the fish.

3. Fish Sticks: For a simple fish tasting activity that is sure to be popular serve mini-tastes of fish sticks with catsup. Look on the label to find out what type of fish it is and find a picture in the library to show the students what type of fish it is. Point out that another way of preserving fish is by freezing.

4. 3-D Fish Figures Bulletin Board:

Cut out fish forms from construction paper. Draw gills and eyes. Staple one side. Stuff with wadded up newspaper. Put fish on bulletin board.

5. Go Fishing for Healthy Food:

Put paper clips on food pictures or small fish cutouts. Tie a magnet on a string, attach string to a stick.
Have children "fish" for their supper. Can they fish for a balanced meal?

Additional Resources:

Film from County Film Library:

"Fish, A First Inquiry", and introduction to fish, where they live and their habits.

Concept D

ENRICHMENT
First Grade
Subject Area: Science

VEGETABLE FRUIT BINGO GAME

10

Behavioral Objective: The student will match pairs of pictures of a variety of fruits and vegetables in a board game.

Process Objective: Grouping, identifying common properties, abstracting, knowledge of the making of observations, inferences, value judgements.

Teacher Information: The game can be modified and similar games can be made up for nuts, farm animals, etc.
Fruits are ripened ovaries of seed bearing plants and all plant foods which contain seeds are true fruits. "Vegetable" is a general term which refers to a plant of any kind. "Vegetables" we eat include roots, stalks, tubers, leaves, and fruits. It is inappropriate to divide plant foods into fruits vs. vegetables. They should be grouped as fruits and vegetables.

Materials Needed:

1 copy of each card (attached)
Colored marking pens - green, yellow, brown, black, red, orange, and purple

Cardboard - 8½ x 11 - 10 pieces (for back of playing card)
Tagboard - 2½ x 2½ inches - 27 pieces
Clear Contact Paper (or laminating machine)
1½" wide tape - green preferred

Vocabulary: fruit, vegetable, (plus all names of fruits and vegetables included in Bingo Game)

ACTIVITY

Bingo Directions:

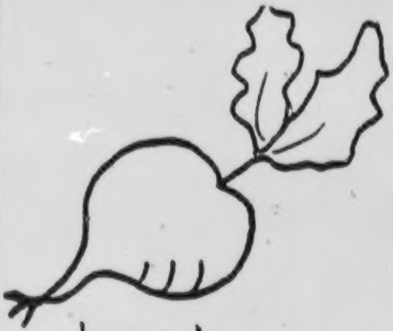
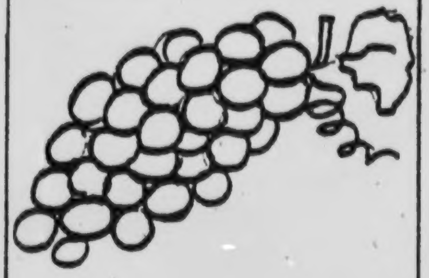
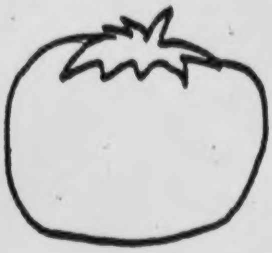
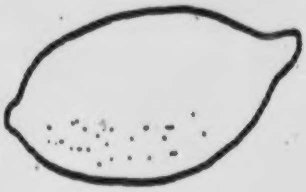
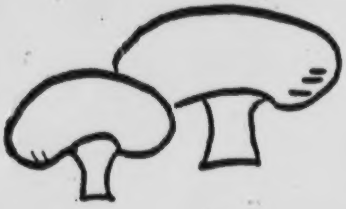
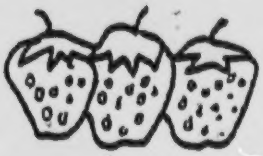
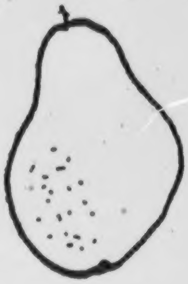
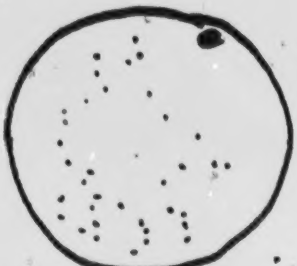
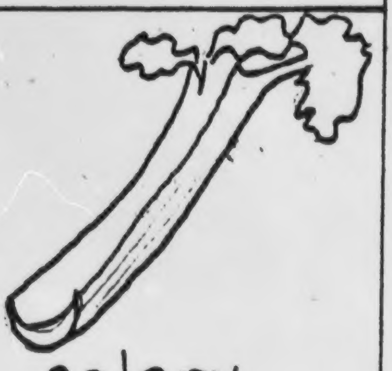
How to prepare the game:

a. Color each of the food pictures. (Bingo cards and flash cards.)
b. Mount the 10 bingo cards on cardboard and cover with clear plastic or laminate game cards first and tape to cardboard with colored tape.
c. Cut each flash card and mount on tagboard square and cover with clear plastic.

To Play: (up to ten students)

Give each student a playing card and 9 markers. Put flash cards in a box or bag. Have a student draw a card. Ask the student to name the item. If the child is unable to name the food, say the name aloud. All students cover the picture of the food if it is on their board. Can be played to black out.
Additional questions can include part of plant, color, soft, or hard, etc.

Vegetable~Fruit Bingo

 beet	 grapes	 tomato
 lemon	 mushroom	 strawberry
 pear	 grapefruit	 celery

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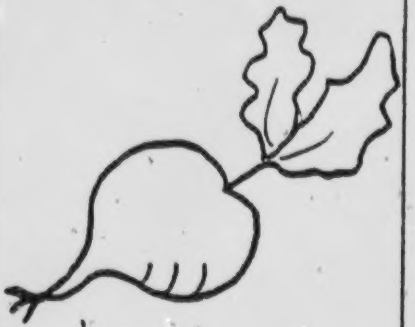
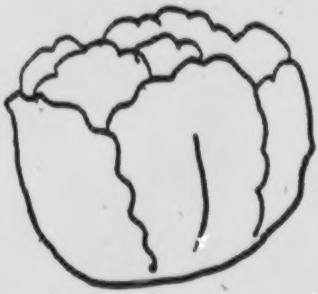
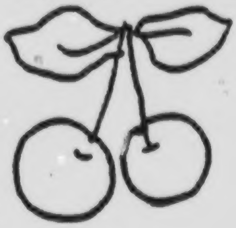
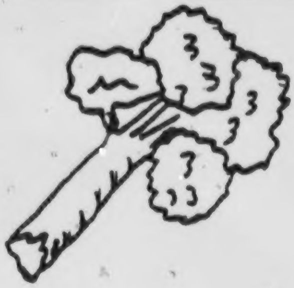
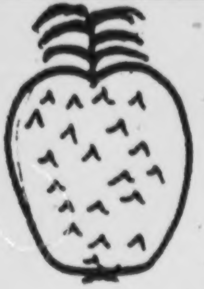
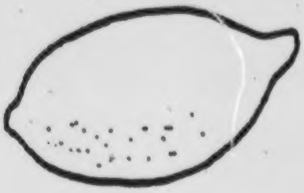
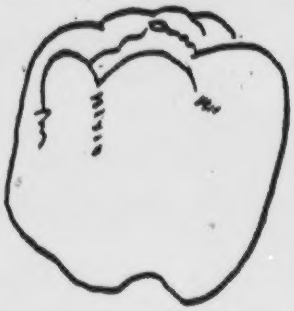
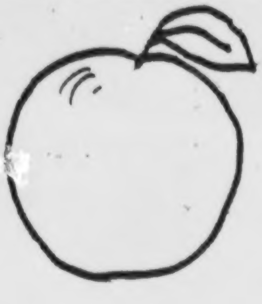
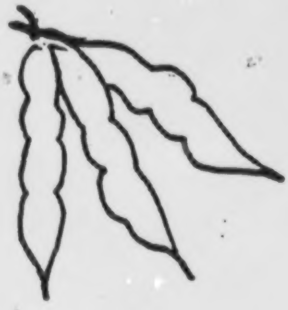
Vegetable ~Fruit Bingo

 beet	 lettuce	 cherry
 broccoli	 pineapple	 lemon
 pepper	 peach	 bean

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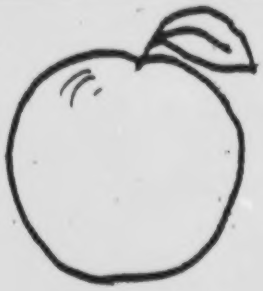
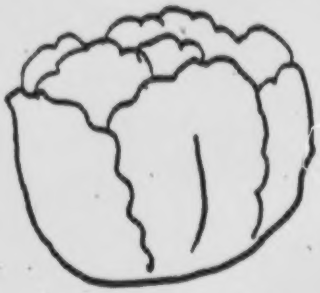
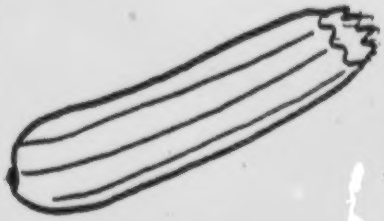
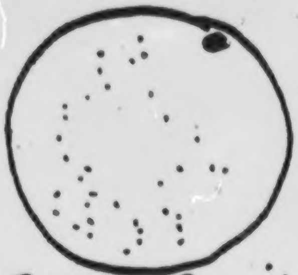
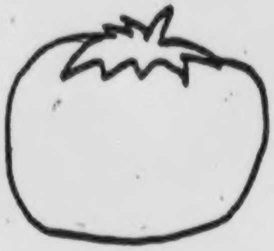
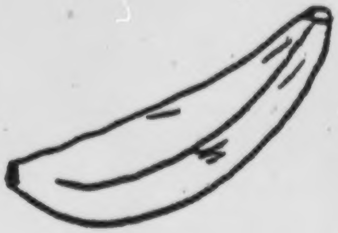
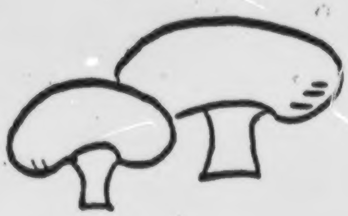
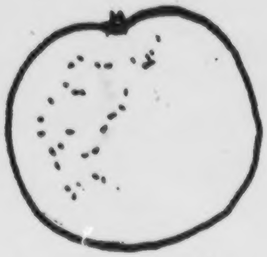
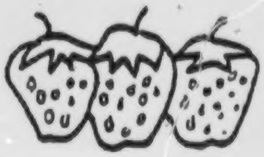
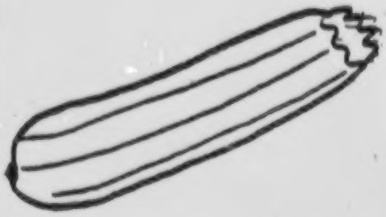
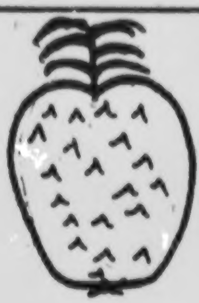
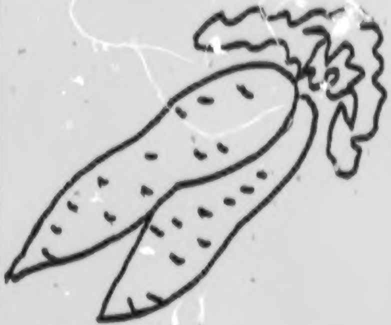
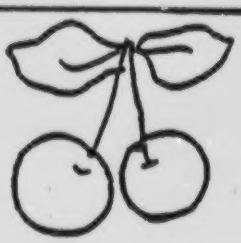
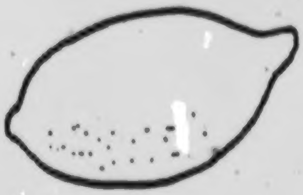
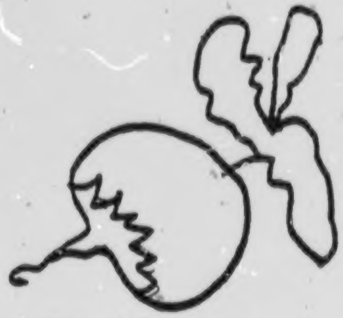
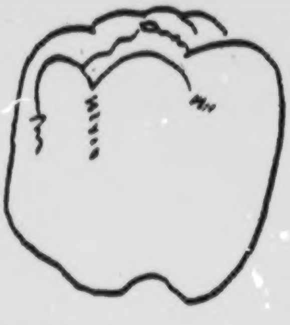
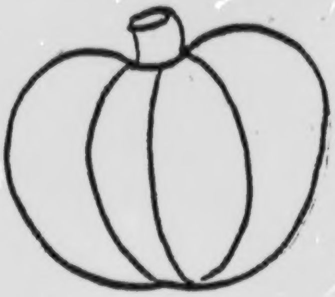
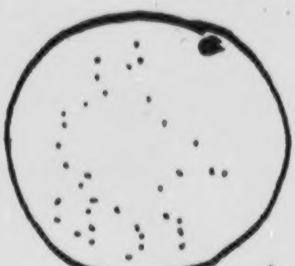
Vegetable-Fruit Bingo

 peach	 lettuce	 squash
 grapefruit	 tomato	 banana
 mushroom	 orange	 strawberry

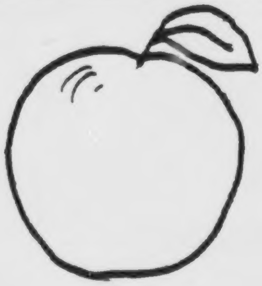
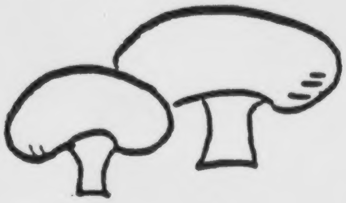
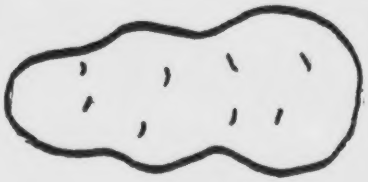
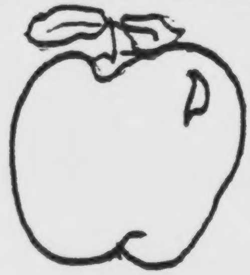
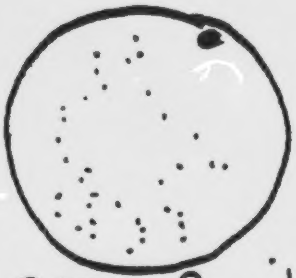
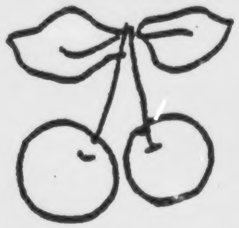
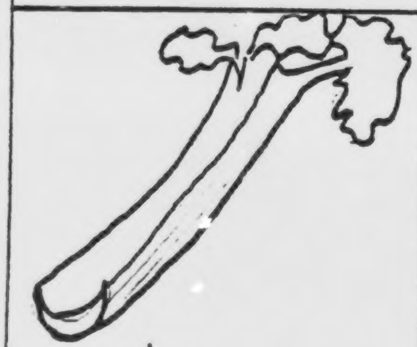
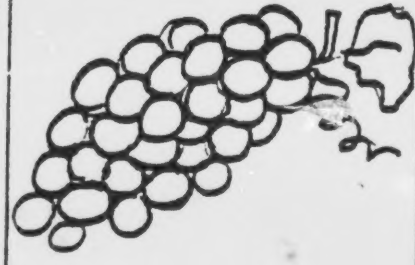
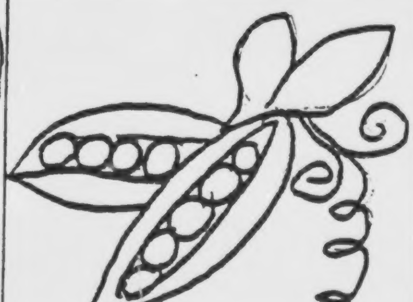
San Mateo City Schools, CA Dept. of Ed.

Vegetable-Fruit Bingo

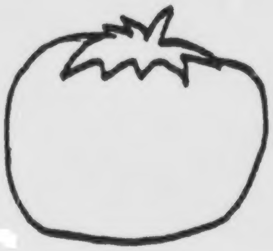
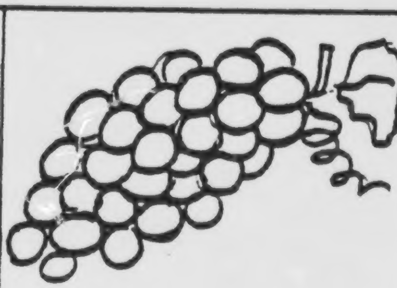
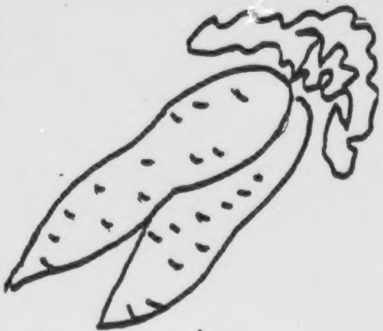
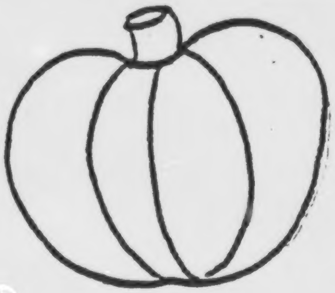
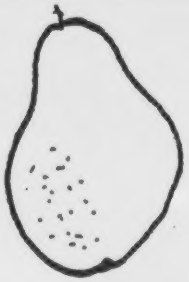
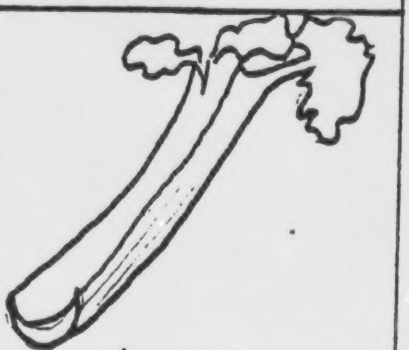
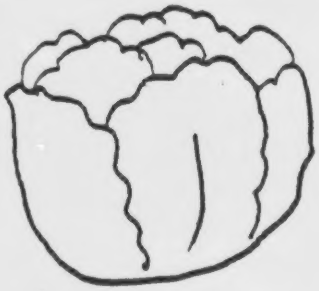
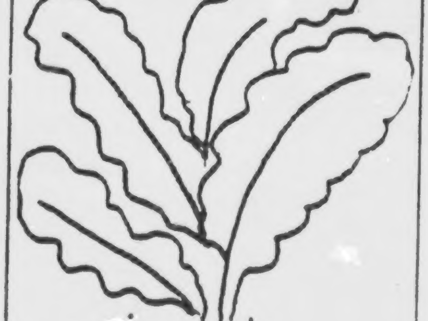
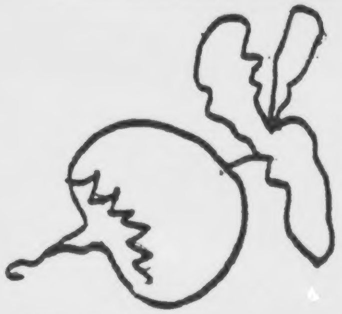
 squash	 pineapple	 carrot
 cherry	 lemon	 radish
 pepper	 pumpkin	 grapefruit

San Mateo City Schools, CA Dept. of Ed.

Vegetable-Fruit Bingo

 peach	 mushroom	 potato
 apple	 grapefruit	 cherry
 celery	 grapes	 peas

Vegetable ~Fruit Bingo

 tomato	 grapes	 carrot
 pumpkin	 pear	 celery
 lettuce	 spinach	 radish

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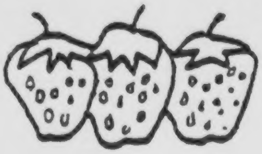
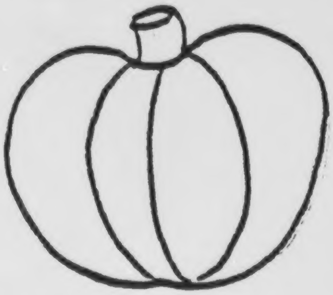
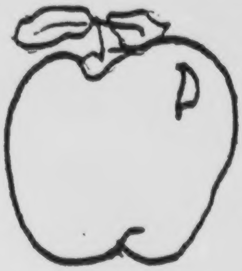
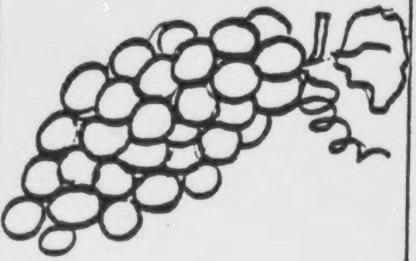
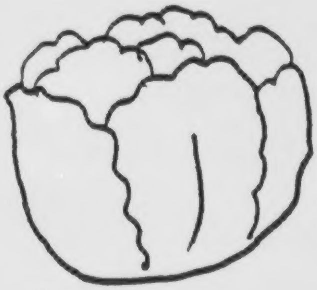
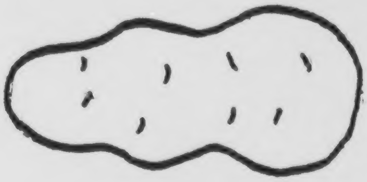
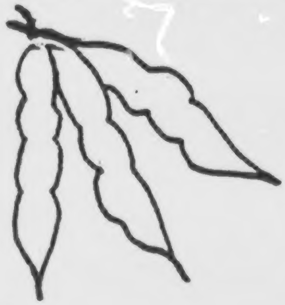
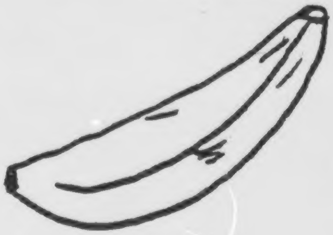
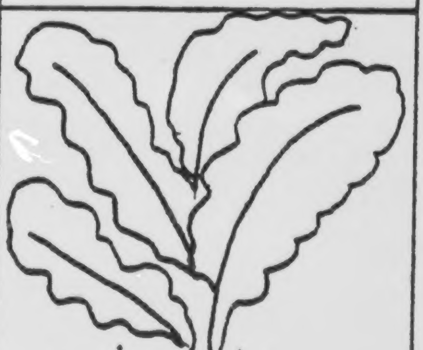
Vegetable - Fruit Bingo

 strawberry	 pumpkin	 apple
 grapes	 lettuce	 potato
 bean	 banana	 spinach

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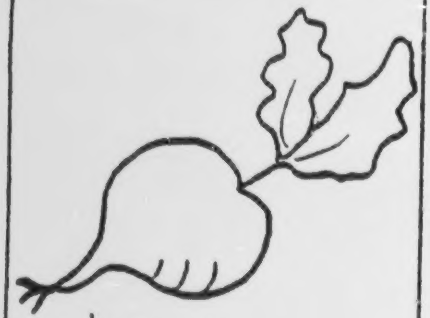
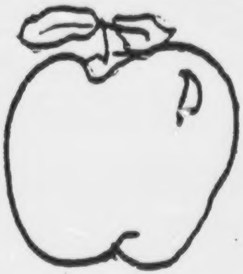
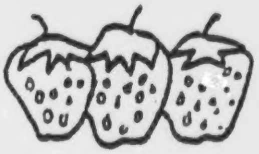
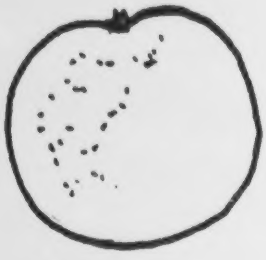
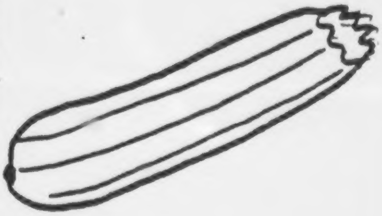
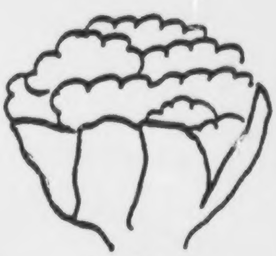
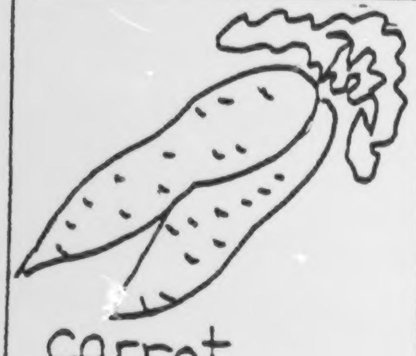
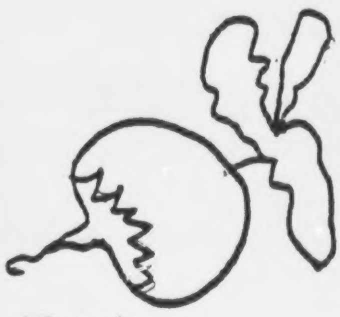
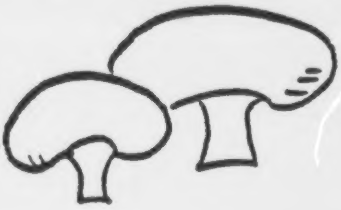
Vegetable ~ Fruit Bingo

 beet	 apple	 strawberry
 orange	 squash	 cauliflower
 carrot	 radish	 mushroom

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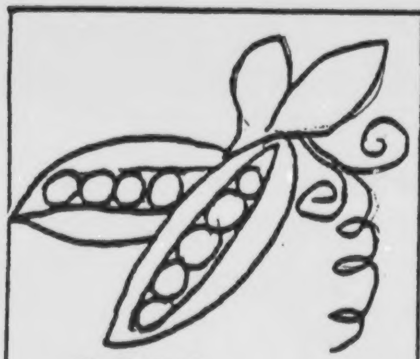
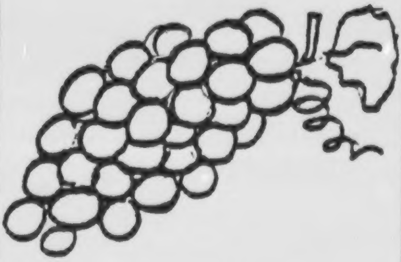
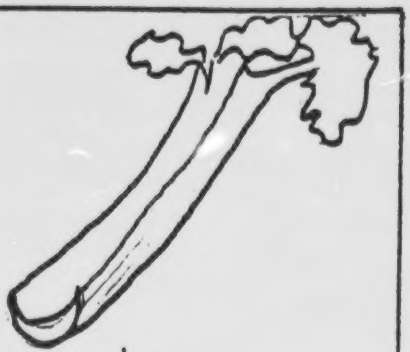
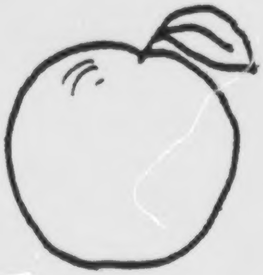
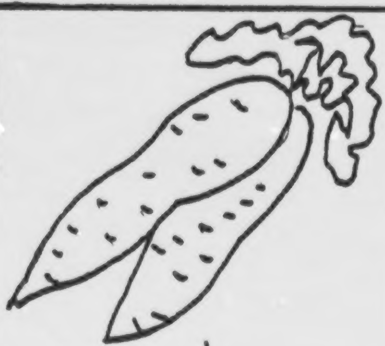
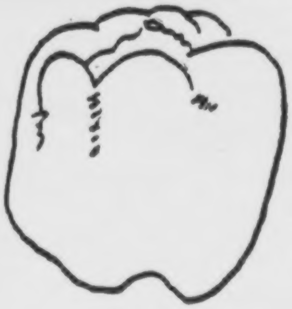
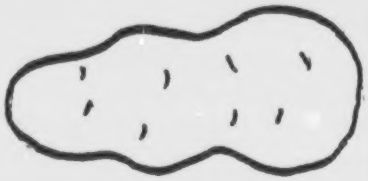
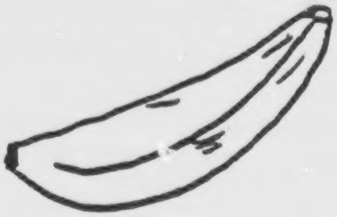
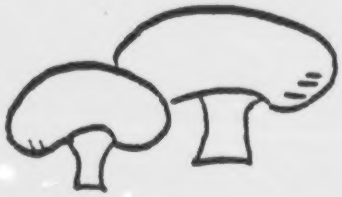
Vegetable-Fruit Bingo

 peas	 grapes	 celery
 peach	 carrot	 pepper
 potato	 banana	 mushroom

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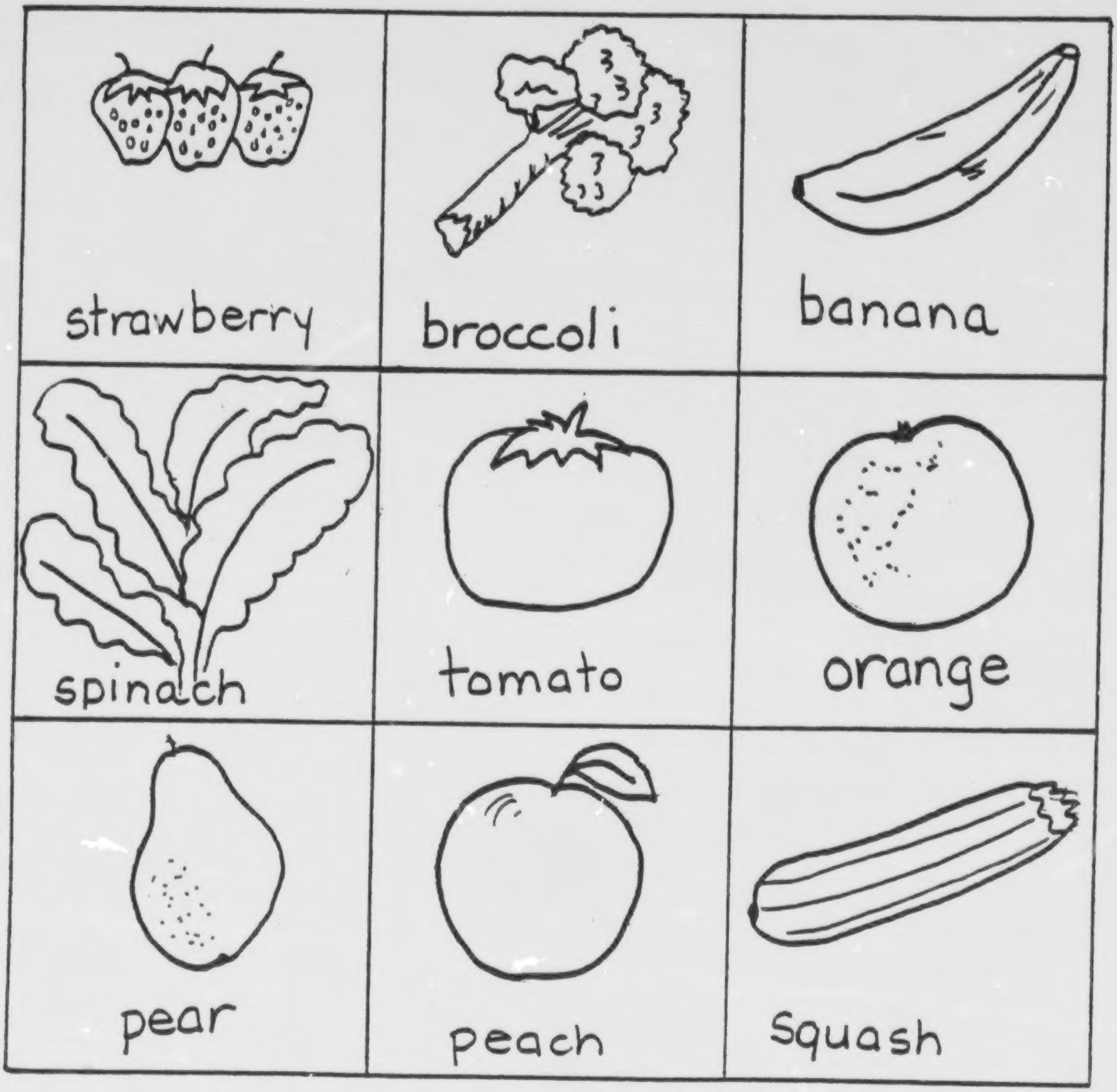
Vegetable~Fruit Bingo


strawberry
broccoli
banana
spinach
tomato
orange
pear
peach
squash

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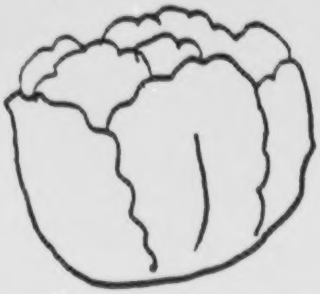
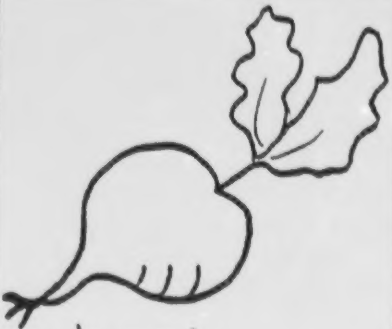
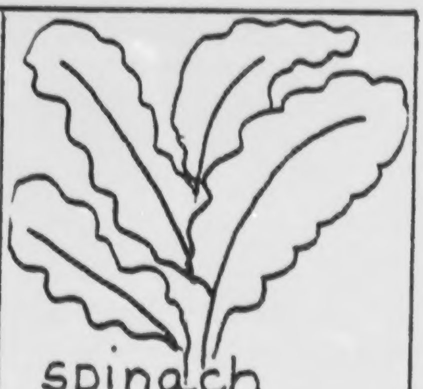
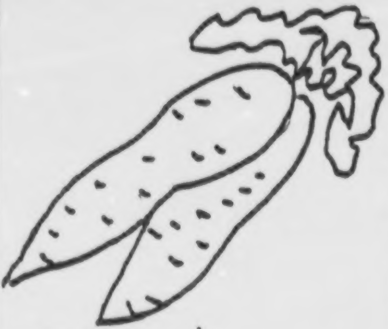
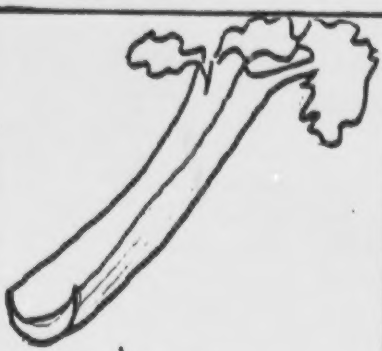
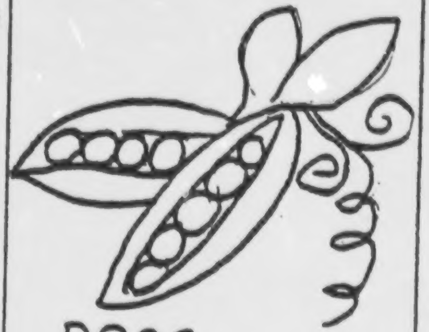
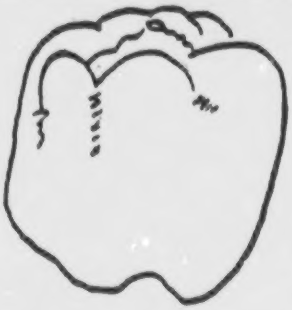
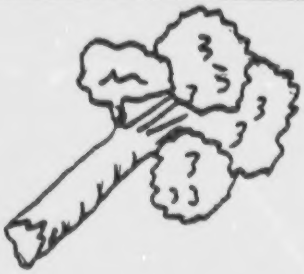
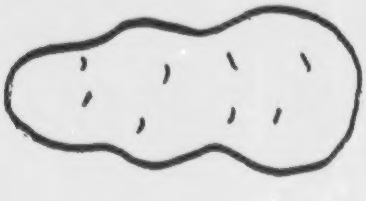
Vegetable~Fruit Bingo

FLASH CARDS

CUT AND COLOR

 lettuce	 beet	 spinach
 carrot	 celery	 peas
 pepper	 broccoli	 potato

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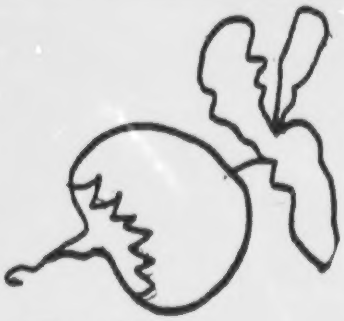
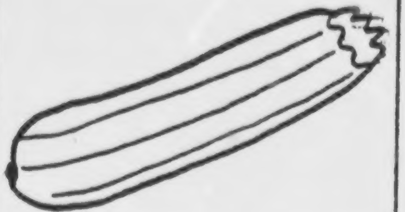
Vegetable-Fruit Bingo

FLASH CARDS
CUT AND COLOR


radish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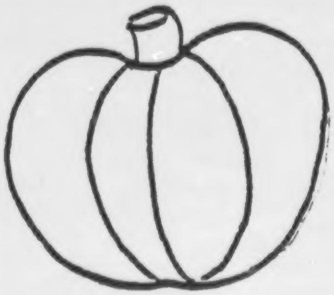
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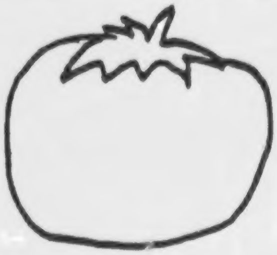
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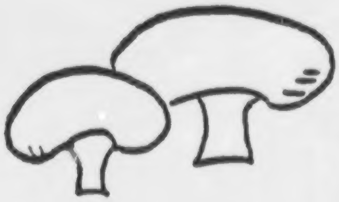
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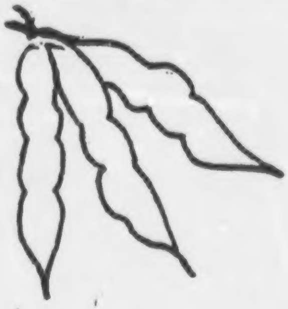
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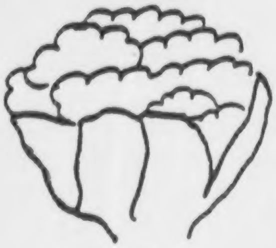
cauliflower

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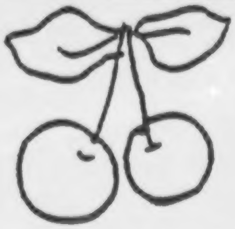
Vegetable-Fruit Bingo

FLASH CARDS
CUT AND COLOR



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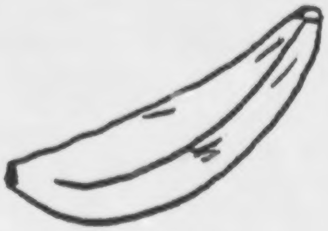

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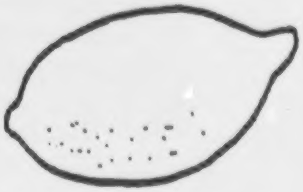

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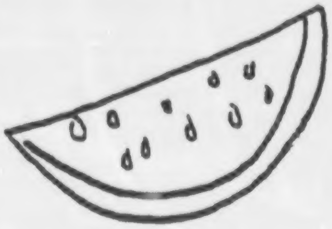

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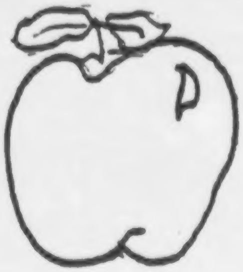

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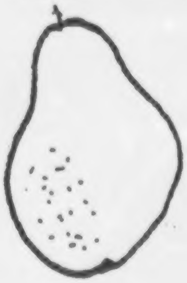

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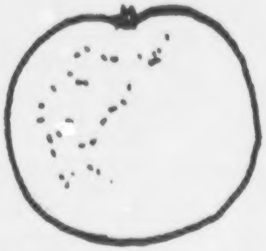

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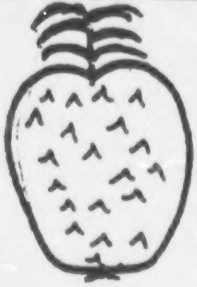

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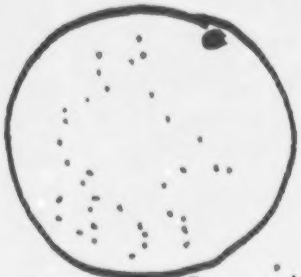

grapefruit

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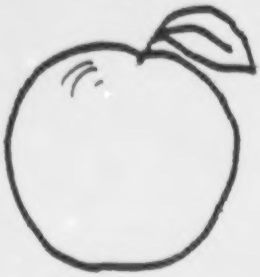
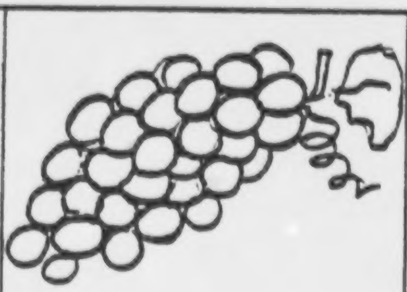
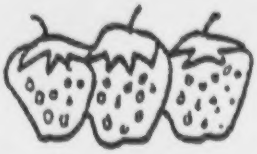
Vegetable-Fruit Bingo

FLASH CARDS
CUT AND COLOR

 peach	 grapes	 strawberry

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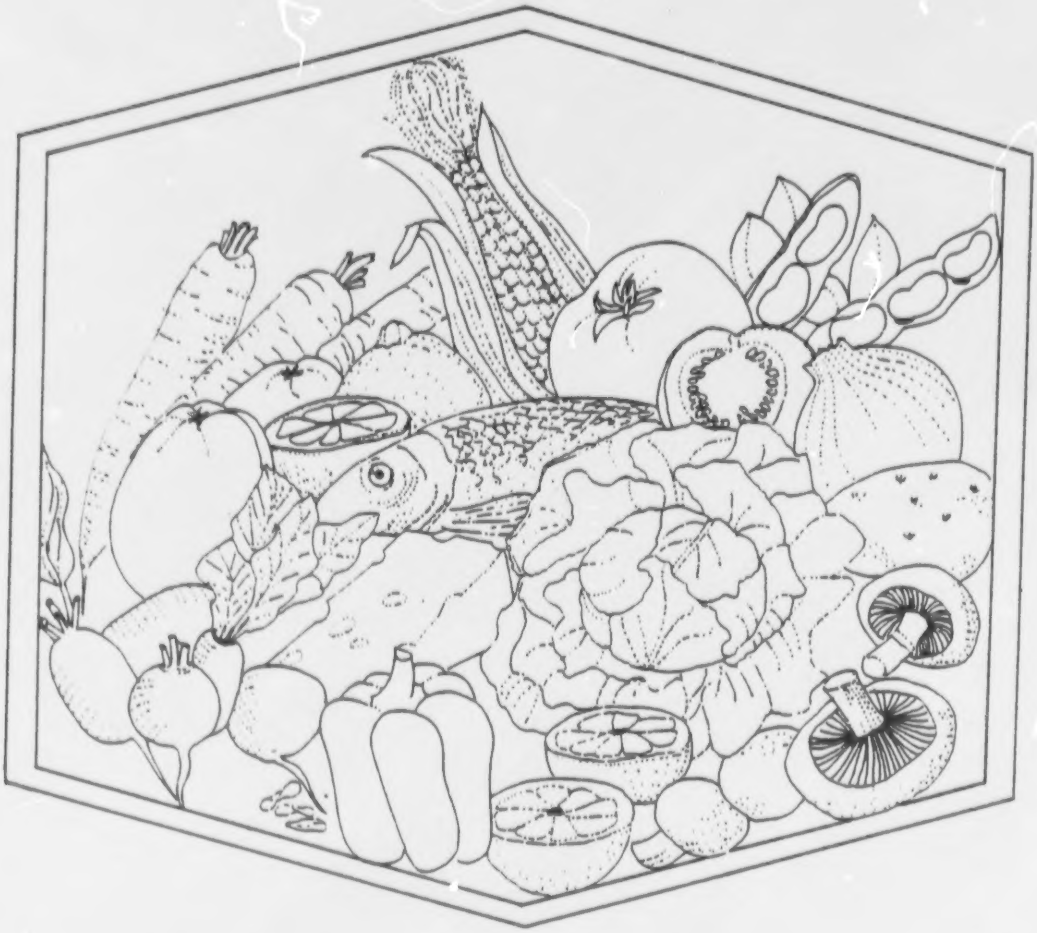
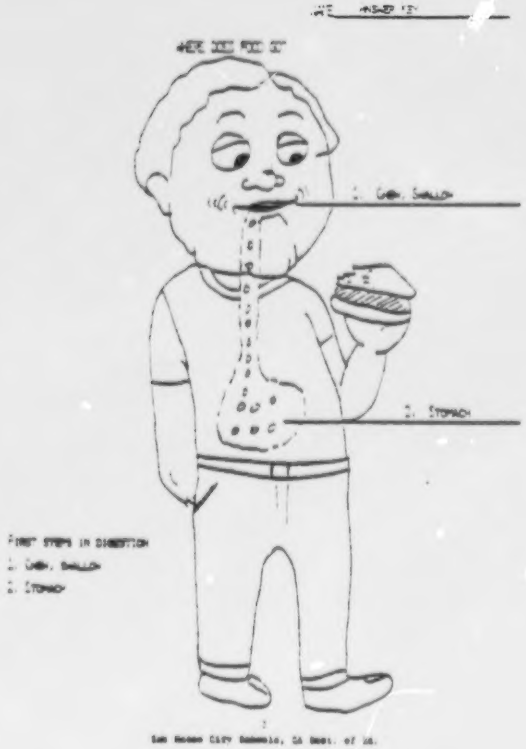
WORKSHEET ANSWER KEYS

Answer keys for the worksheets in the previous lessons have been reduced in size and arranged four to a page in sequential order. Each answer has the same title and page number as the original worksheet used in the lesson.




NAME ANSWER KEY

WHERE DOES FOOD GO?

1. CHEW, SWALLOW

2. STOMACH

FIRST STEPS IN DIGESTION
1. CHEW, SWALLOW
2. STOMACH

[illegible]
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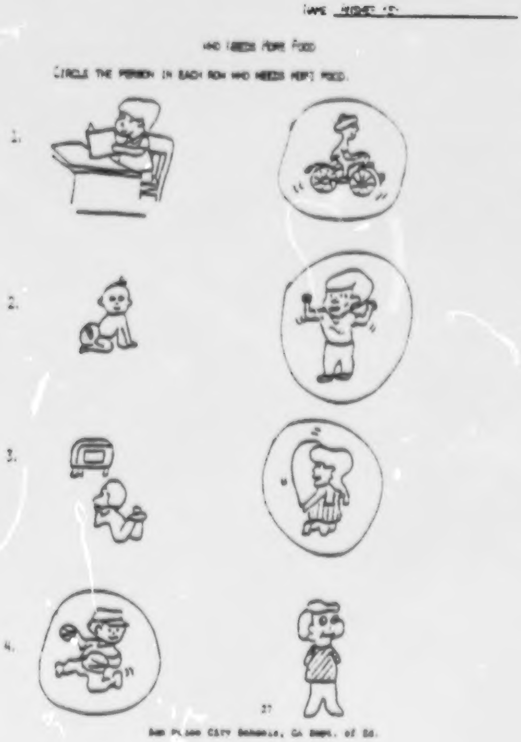
NAME ANSWER KEY

WHO NEEDS MORE FOOD

CIRCLE THE PERSON IN EACH ROW WHO NEEDS MORE FOOD.

1.

2.

3.

4.

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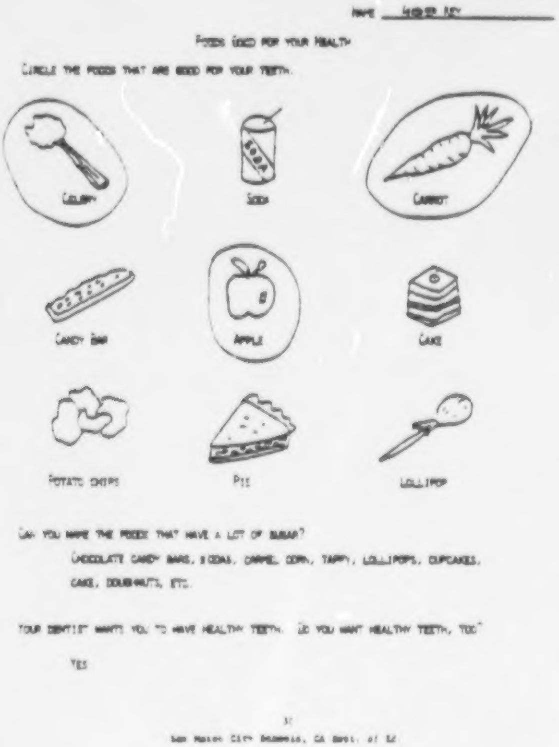
NAME ANSWER KEY

FOODS GOOD FOR YOUR HEALTH

CIRCLE THE FOODS THAT ARE GOOD FOR YOUR TEETH.

CELERY SODA CARROT

CANDY BAR APPLE CAKE

POTATO CHIPS PIE LOLLIPOP

CAN YOU NAME THE FOODS THAT HAVE A LOT OF SUGAR?

CHOCOLATE CANDY BARS, SODAS, CARMEL CORN, TAFFY, LOLLIPOPS, CUPCAKES, CAKE, DOUGHNUTS, ETC.

YOUR DENTIST WANTS YOU TO HAVE HEALTHY TEETH. DO YOU WANT HEALTHY TEETH, TOO?

YES

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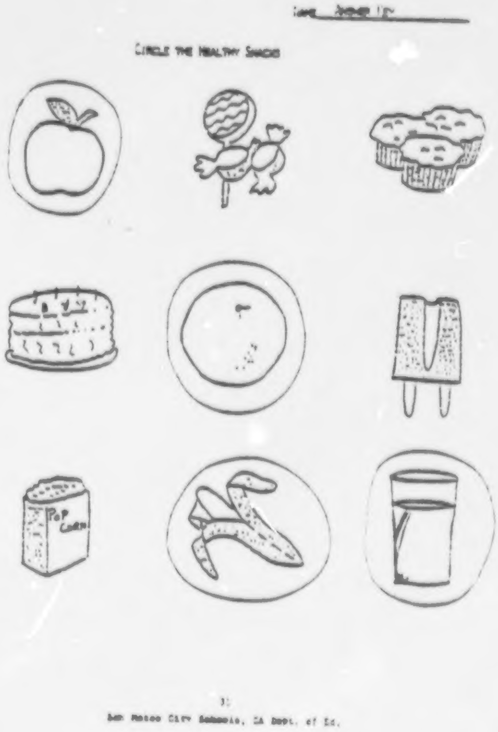
NAME ANSWER KEY

CIRCLE THE HEALTHY SNACKS

31
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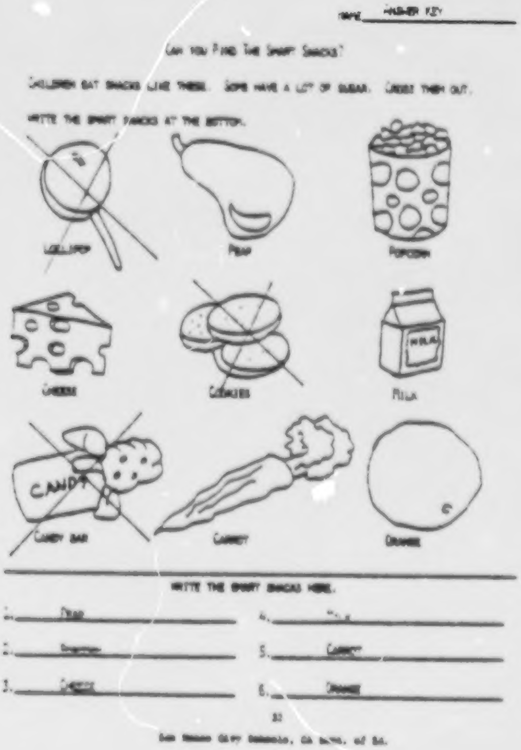

NAME ANSWER KEY

CAN YOU FIND THE SMART SNACKS?

CHILDREN EAT SNACKS LIKE THESE. SOME HAVE A LOT OF SUGAR. CROSS THEM OUT.

WRITE THE SMART SNACKS AT THE BOTTOM.

LOLLIPOP PEAR POPCORN

CHEESE COOKIES MILK

CANDY BAR CARROT ORANGE

WRITE THE SMART SNACKS HERE.

1. Pear
2. Popcorn
3. Cheese
4. Milk
5. Carrot
6. Orange

33

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NAME ANSWER KEY

THE COW GIVES US MILK

CIRCLE THE FOODS MADE FROM MILK.

CHEESE APPLE BUTTER MUFFIN

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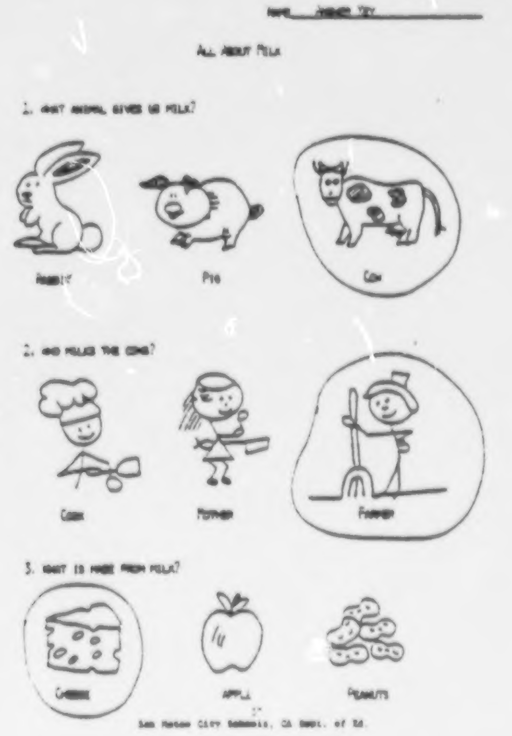

NAME ANSWER KEY

ALL ABOUT MILK

1. WHAT ANIMAL GIVES US MILK?

RABBIT PIG COW

2. WHO MILKS THE COWS?

COOK MOTHER FARMER

3. WHAT IS MADE FROM MILK?

CHEESE APPLE PEANUTS

37

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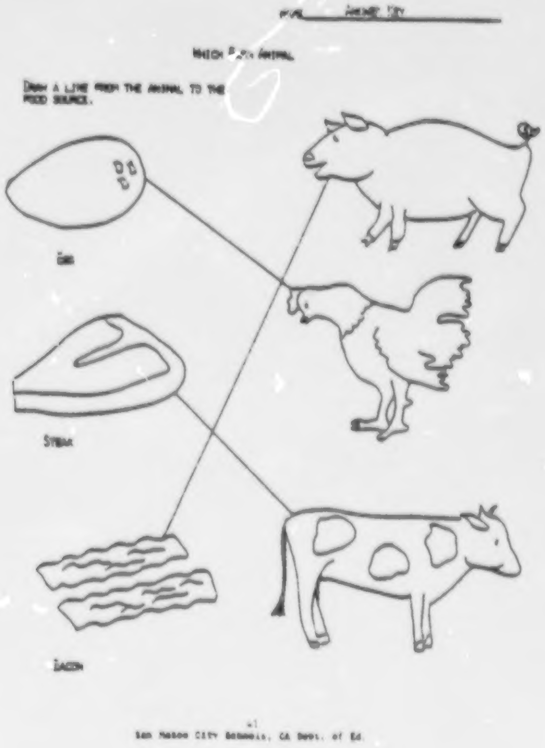

NAME ANSWER KEY

MATCH [illegible] ANIMAL

DRAW A LINE FROM THE ANIMAL TO THE FOOD SOURCE.

EGG

STEAK

BACON

41

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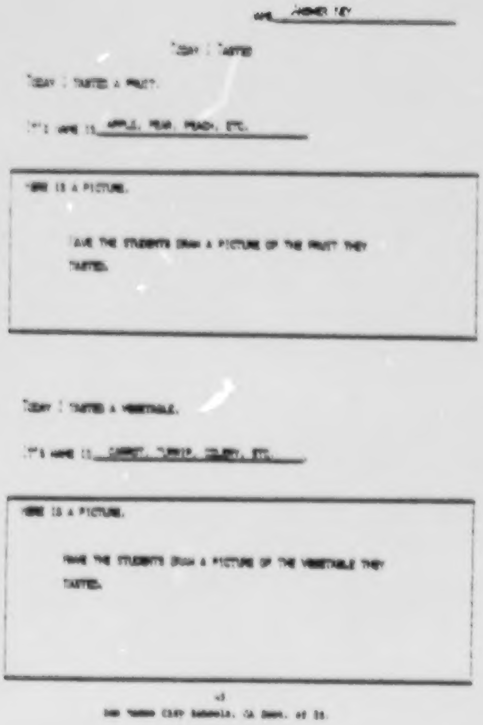
177



NAME ANSWER KEY

TODAY I TASTED

TODAY I TASTED A FRUIT.

IT'S NAME IS APPLE, PEAR, PEACH, ETC.

HERE IS A PICTURE.

HAVE THE STUDENTS DRAW A PICTURE OF THE FRUIT THEY TASTED.

TODAY I TASTED A VEGETABLE.

IT'S NAME IS CARROT, TURNIP, CELERY, ETC.

HERE IS A PICTURE.

HAVE THE STUDENTS DRAW A PICTURE OF THE VEGETABLE THEY TASTED.

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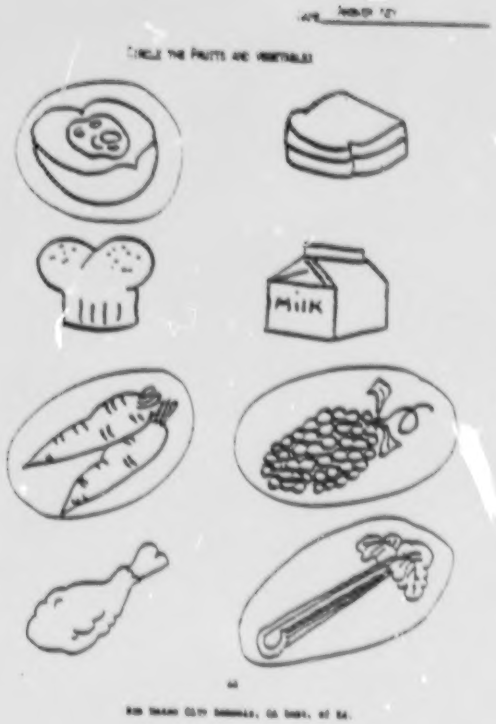

NAME ANSWER KEY

CIRCLE THE FRUITS AND VEGETABLES

44

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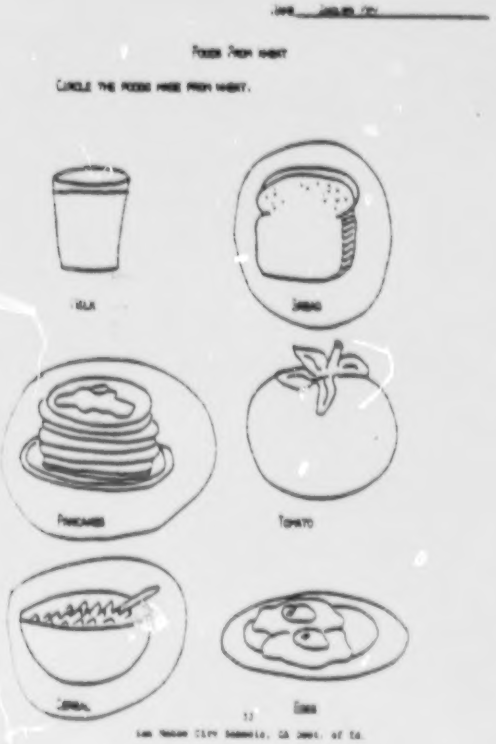

NAME ANSWER KEY

FOODS FROM WHEAT

CIRCLE THE FOODS MADE FROM WHEAT.

33

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SNAC

San Mateo Nutrition Activity Curriculum

"Swing Into Nutrition"

SAN MATEO CITY SCHOOL DISTRICT
50 Peninsula Avenue
P.O. Box K
San Mateo, California 94402

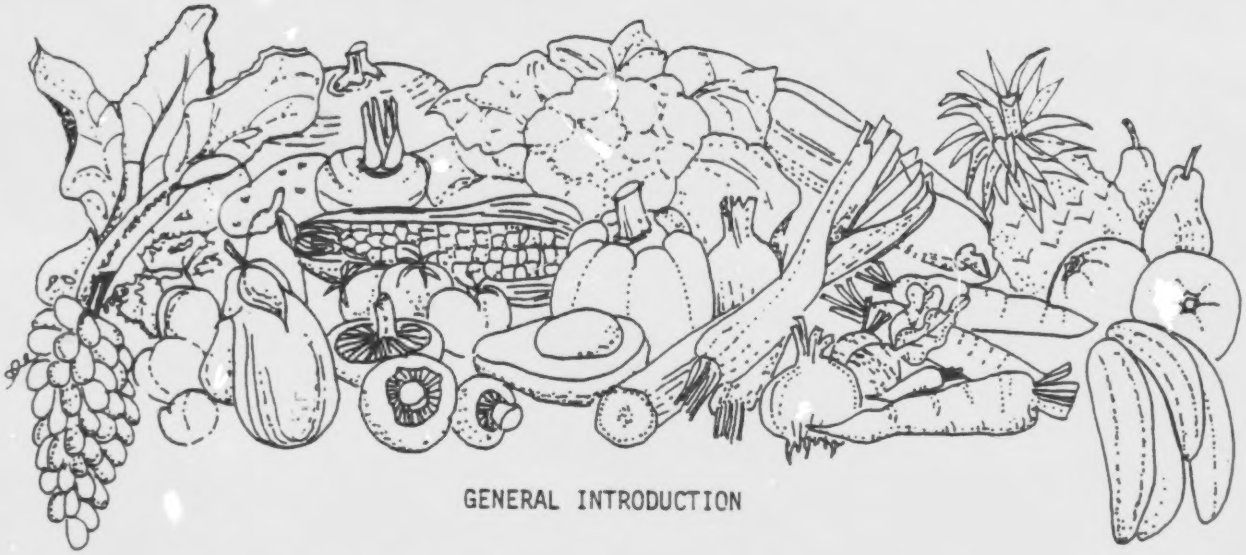
PS 011893

Dr. Julian Crocker, Superintendent
Dr. Lillian Wehmeyer, Assistant Superintendent

Miss Deborah Barley
Nutrition Education Specialist
Project Director

Funded 1976-80 By California State Department of Education
1975 Child Nutrition Facilities Act

January 1980
San Mateo City School District



GENERAL INTRODUCTION

Nutrition Education starts with you! The San Mateo City School District has designed a program in the elementary grades to integrate nutrition education into the general curriculum.

The goal of this program is to prepare elementary grade students to develop and improve healthful food habits. By the time the student leaves the elementary school, he/she should understand the relationship between food habits and well-being; should express concern that his/her food choices promote well-being; should demonstrate a willingness to taste new foods; and should be prepared to make informed decisions regarding his/her food choices. To achieve these purposes, the program focuses on the theme:

"SWING INTO NUTRITION!"

The program needs and encourages active support and involvement of students, parents, and staff members of a multicultural population. The program is based on five concepts:

(A) Food Choices and Health
(B) Factors influencing Food Choices
(C) Food Related Careers
(D) Consumer Competencies
(E) Food Safety and Sanitation

It is a multi-disciplinary curriculum in which cognitive and effective objectives in all subject areas including language arts, science, health, social studies, and math are integrated with nutrition concepts and synthesized with appropriate process goals (teaching and instructional methods). These process goals have three sources: the person, society, and the disciplines.

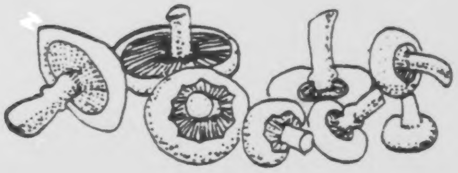
Each lesson contains directions which include behavioral and process objectives, a concept focus which is indicated by a letter in the upper left-hand corner, teacher information, materials needed or suggested, specific directions for motivation and activities, evaluation or pupil performance, and additional resources and activities. Cooking and food preparation activities are occasionally suggested. To supplement these activities, a wide collection of cookbooks and recipes are available in the Project Resource Library.

The lessons are numbered in sequence, but the teacher may rearrange the lessons to suit classroom needs and schedule. In addition to these lessons, there are ENRICHMENT lessons at the end of each Curriculum Guide to reinforce previous lessons.

All of the lessons and activities mentioned in this Curriculum Guide have been designed, tested, evaluated and articulated by Project teachers and nutritionists. They have proven effective for all participants.

Remember: The nutrition activities involving children are not only educational but fun. So join us and ......

"SWING INTO NUTRITION!"



ACKNOWLEDGEMENTS

Many, many people have helped and contributed valuable time in the development, teaching, and evaluation of the San Mateo Nutrition Education Project. The Nutrition Education Staff in San Mateo City School District wishes to acknowledge and thank these persons for their special achievements.

Food Service Director	Carvill Veech (Project Director 1976-79)
Nutrition Education Aide	Lenore Hicks
The Board of Education	Donald Hill Sue Lempert Albert Di Matteo Robert Braun Jeanne Schlueter
All Project K-5 Teachers	Laurel School North Shoreview School
Project Principals	Warren Kofler Charles Moorer
Graphic Artists	Brooke Travers William Kirk David Moore

AND

School Food Service staff members, parents, school nurses, the Project Evaluator Howard Wolff, Ph.D., Special Curriculum Consultant Anna Nuernberger, and Nutrition Education secretarial staff, especially Althea Jocz and Barbara Harris.

SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

(SNAC)

"SWING INTO NUTRITION!"

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Worksheet Answer Keys . . . . 61 - 65

SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

CURRICULUM GUIDE

Second Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
1	Variety Is The Spice Of Life	To acknowledge the importance of a variety of foods for enjoyment and good health.	A	Health	1
	"Food Preference Survey" *Game*	To identify a variety of foods by preference.	A	Health	3
	"And Four To Grow" *Puppet Play*	To illustrate the importance of a variety of foods for good health.	A	Health Art	5
	"Try It - You'll Like It" *Worksheet (fill-in)*	To encourage the consumption of a variety of foods.	A,B	Health	11
2	Four Ways To Health With Food - The Milk Group	To identify the main function of the milk group as building strong bones and teeth and classify milk group foods.	A	Health	12
	"Circle The Milk Group Foods" *Worksheet (circling)*	To reinforce the foods in the milk group.	A,D	Health	14
3	Four Ways To Health With Food - The Meat Group	To identify the main function of the meat group is for growth and repair of the body, and classify meat group foods.	A	Health	15
	"Circle The Meat Group Foods" *Worksheet (circling)*	To reinforce the foods in the meat group.	A,D	Health	17
4	Four Ways To Health With Food - The Vegetable-Fruit Group	To identify the main function of the vegetable-fruit group as keeping healthy, and classify vegetable-fruit group foods.	A	Health	18

CURRICULUM GUIDE

Second Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
	"Circle The Vegetables and Fruits" *Worksheet (circling)*	To reinforce the foods in the vegetable-fruit group.	A,D	Health	20
5	Four Ways To Health With Food - The Bread-Cereal Group	To identify the main function of the bread-cereal group as an energy provider, and classify bread-cereal group foods.	A	Health	21
	"Circle the Bread-Cereal Group Foods" *Worksheet (circling)*	To reinforce the foods in the bread-cereal group.	A,D	Health	23
	"4 Basic Food Groups" *Worksheet (fill-in)*	To identify the 4 basic food groups.	A,D	Health	24
	"Four Food Groups Crossword Puzzle" *Puzzle (fill-in)*	To illustrate the 4 basic food groups.	A,D	Health	25
6	Healthy Meals: Four Food Groups	To evaluate meals for the four food groups.	A	Health	26
	"What's Missing Here?" *Worksheet (fill-in)*	To illustrate the four food groups at each meal.	A	Health Art	28
	"Well-Balanced Breakfast" *Worksheet (fill-in)*	To reinforce the four food groups used in a breakfast meal.	A	Health	29
	"A Balanced Meal Has All 4 Food Groups" *Worksheet (fill-in)*	To illustrate the four food groups.	A	Health Art Language	30
	"Which Food Group is Missing?" *Worksheet (fill-in)*	To identify with each of the four food groups.	A	Health	31
	"X Marks The Spot" *Worksheet (fill-in)*	To identify and reinforce the four food groups at mealtime.	A	Health	32

CURRICULUM GUIDE

Second Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
7	Four Ways To Health With Food - School Lunch	To evaluate Type A lunches for four food groups, and plan a Type A lunch.	A	Health	33
	"How Food Helps Your Body" *Worksheet (matching)*	To identify the need of each food in relation to how it helps your body function.	A	Health	36
	"What's For Lunch?" *Worksheet (Writing and circling)*	To illustrate the foods you had for lunch.	A	Health Language	37
	"Type A Lunch" *Worksheet (circling and fill-in)*	To identify and reinforce the Type A lunch pattern.	A	Health Language	38
	"Lunch Menu Contest" *Worksheet (Writing)*	To illustrate a Type A lunch menu.	A	Health Language	39
	"Best Foods For A Good Lunch" *Worksheet (circling)*	To reinforce the best foods for a good lunch.	A	Health	40
	"Four Food Groups" *Worksheet (matching)*	To identify the food group in relation to how it helps your body function.	A	Health	41
8	Television Detective	To evaluate television food commercials for nutritional value.	A,B,D	Social Studies Math Health	42
	"Television Detective" *Worksheet (fill-in)*	To identify television food commercials with the food groups.	D	Math Health	44
	"Graph Television Food Ads" *Graphing Project*	To graph food groups with advertisements on television.	D	Math Health	45
9	Nutritious Parties	To identify delicious, nutritious party foods.	A,E	Health	46

CURRICULUM GUIDE

Second Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
	"Goblin Cookies" *Recipe*	To introduce a tasty whole grain product and to practice cooking using proper sanitation techniques.	A,E	Health	50
	"Clown Face Salad" *Recipe*	To introduce a tasty salad and to practice cooking using proper sanitation techniques.	A,E	Health	51
	"Raggedy Ann Salad" *Recipe*	To introduce a tasty salad and to practice cooking using proper sanitation techniques.	A,E	Health	52
10	Name That Grain ENRICHMENT	To identify raw and processed grains and and cereals; and experience grinding of wheat and baking bread.	C,D	Science Social Studies	53
11	Food And Your Senses	To recognize the role of the major sense organs in food enjoyment.	B	Science Health	56
	"Use Your Five Senses" *Activity Center Layout*	To develop the 5 senses of seeing, smell, touch, taste and hearing.	A,B	Language Arts	58
	"Use Your 5 Senses" *Worksheet (fill-in)*	To illustrate and identify a food by using the 5 senses of seeing, smell, touch, taste and hearing.	B	Language Arts	59
	"Do You Know About Your Senses?" *Worksheet (fill-in)*	To reinforce the 5 senses of seeing, smell, touch, taste and hearing.	B	Health	60

Concept A:

Second Grade
Subject Area: Health
Time: Day 1 - 20 min.
Day 2 - 20 min.

VARIETY IS THE SPICE OF LIFE

Behavioral Objective: The student will realize that a variety of foods in the diet is not only more enjoyable but that the body needs different foods for different purposes.

Process Objectives: Willingness to explore alternatives; open-mindedness to alternatives.

Teacher Information: This lesson introduces the topic of good nutrition and the importance of eating a variety of foods for enjoyment and for good health. Also included is the importance of being willing to try a new food if it is one that is good for us. The lesson will briefly introduce the Four Food Groups as a means of selecting a variety of foods that are good tasting and good for us. (Additional information of the Four Food Groups attached.) Lessons 2-5 will investigate each of the Four Food Groups individually.

Materials: Collection of food pictures that include all one kind or color.
Bread and Jam for Frances - book, tape, record (Project SNAC)
Food Preference Survey (attached)
Sound Filmstrip: Health: Let's Begin: Nutrition, Guidance Associates (Project SNAC)

Vocabulary: Variety, nutrition, healthy, enjoy, growth, milk, meat, fruit, vegetable, bread, cereal

ACTIVITY

Motivation:

Display the food pictures. Have students tell how they are alike (all the same kind or color). Ask them if they think eating just these kinds of food all the time would be fun. Do they think they would feel good if they ate just these foods all the time?

Tell the class that they will hear a story about a badger who ate only one kind of food.

Development:

Day 1 Play the tape or read the story of Bread and Jam for Frances to the class. After the children listen to the story about a silly little badger who thought she only wanted to eat bread and jam, discuss with them why she changed her mind. Ask the students, "What would you do if you were Framces?" "What would you do if you were Frances' mother?"

Point out that one reason we eat is because we enjoy it and that a variety of food is more fun.

Take a class poll by using the "Food Preference Survey". Directions are included on the survey. From the survey, discuss the children's attitude about trying new foods. Ask the children this question:

> If you were offered a food that looked good and smelled good but that you had never tasted before, would you try it?

Day 2 Recall that the day before you had talked about how eating a variety of foods was more fun than eating the same food all the time.

Tell the class that an even more important reason for eating a variety of foods is that different foods give our body different things (nutrients), each of which the body needs to grow and stay healthy. No one food gives us everything we need. By eating from the Four Food Groups every day, we know that we are eating what our body needs.

Introduce the filmstrip. Tell the students to listen and watch carefully for the names of the Four Food Groups.

Show the filmstrip and follow with a brief discussion of the names of the Four Food Groups. Explain to the children that over the next few weeks they will have a chance to learn more about each of these groups and how to choose foods that are healthy.

Evaluation:

At the close of the lesson, ask the students, "Now that you know about how important it is to eat a variety of foods and you know that there are four healthy food groups, would you eat a new food because you know it is good for you even if you never tried it before?

Additional Activities:

1. Arrange for the presentation of "Four to Grow" puppet show by nutrition staff or parents. After the children see the puppet show, they may want to write a puppet show using the Four Food Group puppets. (Script is attached.)

2. Read "Dandelion, the Lion Who Lost His Roar", a story about a lion who loses his roar but feels much better when he eats lots of vegetables and fruits instead of sweets. The Four Food Groups are introduced briefly at the end. (Copy of story attached.)

3. "Try It - You'll Like It! Club" Ask students to try new foods at home and tell about it in class. Make a list of new foods tried. A "Try It - You'll Like it! Club membership roster can be started. Each child who reports would be a member. (Worksheet attached.)

FOOD PREFERENCES SURVEY

Directions to Teacher: Read each food name and have students respond by thumbs up to foods they have tried and like and by thumbs'down to food they havent tried or don't like.

As you read each food name, write it on the board and take a class tally. Enter the number of students who like or don't like/never tried. At the end of the survey, find the favorite food, the least favorite food.

If desired, plan to taste the least favorite food at a later date. Then retally and find if there is any change in students attitude toward the food.

I WILL READ THE NAME OF SOME FOODS. IF YOU HAVE TRIED IT AND LIKE IT, PUT YOUR THUMB UP IN THE AIR. IF YOU HAVE NEVER TRIED IT OR DO NOT LIKE IT, PUT YOUR THUMB DOWN. (Demonstrate)

1. TACO
2. SQUASH
3. YOGURT
4. TOMATO
5. EGGPLANT
6. BROCCOLI
7. FRIED RICE
8. BRANFLAKES
9. PIZZA
10. BEAN SPROUTS
11. CARROT SALAD
12. HAMBURGER
13. SPINACH
14. CHILI
15. FISH
16. PEANUTS
17. CHEESE
18. PEARS
19. GRAPEFRUIT
20. LETTUCE SALAD

San Mateo City Schools, CA Dept. of Ed.

CRITERIA FOR THE FOUR FOOD GROUP CLASSIFICATION SYSTEM

The Milk Group - 3 Servings

Milk and most of the foods made from milk fit in this Group. They include:

Milk, Cheese, Cottage Cheese, Custard, Ice Cream, Milkshakes, Malts, Yogurt, Cocoa and Pudding made with milk.

Some foods made from cream do not fit into this Group. These are: butter, whipped cream, sour cream and cream cheese. Because cream is only a part of milk, these foods do not supply all the nutrients found in milk.

The Meat Group - 2 Servings or More

All meats and some foods that provide about the same nutrients as meat fit into this Group. They include:

.Nuts, Peanuts, Peanut Butter
.Eggs
.Dried Beans and Peas, such as Baked Beans, Kidney Beans, Pinto Beans, Refried Beans, Split Peas, Dried Black-eyed Peas
.Beef, Pork, Lamb, Poultry, Fish

The Vegetable-Fruit Group - 4 Servings or More

Most green plants or parts of plants fit in this Group. They include:

.Oranges, Grapefruit, Tomatoes
.Carrots, Potatoes, Broccoli
.Lettuce, Spinach, Cabbage
.Apples, Berries, Grapes
.Green Beans, Green Peas, Corn

The Bread-Cereal Group - 4 Servings or More

Foods made from grains (or flour) fit in this Group. They include:

.Breads, including Muffins, Biscuits, Pancakes, Tortillas
.Cereals, including Corn Flakes, Oatmeal, Rice, Grits
.Pastas, including Spaghetti, Macaroni, Noodles
.Crackers, including Saltines, Graham Crackers

Extra Foods - Very Few or None

All foods that are mostly sugar or fat or those that are used for flavoring are Extra Foods. They include:

.Soft Drinks, Popsicles, Gelatin Dessert, Jellies and Jams
.Cookies, Doughnuts, Cakes, Pies, Candy, Butter, Cream, Mayonnaise
.Margarine, Pickles, Relishes, Catsup, Mustard, Potato Chips
.Corn Chips

San Mateo City Schools, CA Dept. of Ed.

AND FOUR TO GROW

written by Millie Bobroff
Saratoga Junior Women's Club

A one act puppet show on
Nutritional Education
presented by the Saratoga
Junior Women's Club

San Mateo City Schools, CA Dept. of Ed.

Act I, Scene I

STORYTELLER: Once upon a time, there was a little boy named Junior.

JUNIOR: (popping up) Hi, boys and girls! I'm Junior!

STORYTELLER: Now Junior hated to eat everything that was good for him. Like spinach.

JUNIOR: Ugh!

STORYTELLER: And cheese.

JUNIOR: Blah!

STORYTELLER: And liver.

JUNIOR: Yuck!

STORYTELLER: And what he lived on mostly was sugar krunchy cereal, chocolate cookies, soda pop with ice and gumdrops.

JUNIOR: Yummy, my favorite foods.

STORYTELLER: One day Junior woke up feeling funny. Not sick, really, just funny. (Junior's head is on the pillow)

VOICE OFF-STAGE: Junior, come and play ball. It's a beautiful day.

JUNIOR: (weakly) No, not today, Sarah, I don't feel like it.

VOICE: I'll come up and we'll build a giant castle with your blocks.

JUNIOR: No, I think I'll lie down. See you later.
(puts head back on pillow and sighs)
What's the matter with me? I have no energy today. I just want to go back to sleep.
(Enter Mister Milk)

MILK: Junior, did you drink your milk today?

JUNIOR: Who are you?

MILK: I'm Mister Milk. If you want to be strong and hit home runs for your team, you should drink three glasses of me everyday.

JUNIOR: Gee, I like soda pop better.

MILK: Soda pop! Humph! Soda pop doesn't care if you can swing on monkey bars or climb a tall tree. I do! When you drink three glasses of me every day, I make sure your bones are strong and your teeth are healthy and your skin is soft. So do my friends Chester Cheese and Isabel Ice Cream.
(Enter Elsie Egg, shaking her head)

EGG: What about me, Mister Milk. Tell the boy what I do.

MILK: Junior, I want you to meet Elsie Egg. She is...

EGG: (Interrupting) I am just as important as you are, Mister Milk. I and Meat, Fish, Poultry, Dry Peas and Nuts produce nice healthy glows in children.

MILK: (trying to get a word in) Yes, Elsie, and furthermore...

EGG: We help red blood cells carry oxygen all over the body.

MILK: I know Elsie and also...

EGG: And we give boys and girls healthy eyes and good appetites and digestion.

MILK: Yes, Elsie.

EGG: And keep them from getting infections.

MILK: Very true, Elsie.

EGG: Now, what do you have to say for yourself?

MILK: Well, Elsie Egg, I was going to say that you are one of the greatest sources of protein and without protein, no one could survive.

EGG: You were?

MILK: Yup.

EGG: (mellowing) I didn't know you were going to say that. (pause) What if I were back behind the curtain and you introduced me this time.

MILK: Too late, Elsie. It's Carlos Carrot's turn.
(Exit Egg)
Presenting the great Carlos Carrot!
(Enter Carlos Carrot, bowing)
Carrots and apples and spinach and squash and lots of other fruits and vegetables give you energy.

CARROT: (hopping up and down) I'm full of energy. I'm full of energy.

JUNIOR: That's what I need today. Sure wish I had a carrot stick last night instead of a marshmellow.

CARROT: (bouncing) My fruit and vegetable friends help keep gums, skin, muscles and blood vessels healthy and we PREVENT SCURVY. (bumps into Junior) Excuse me!

JUNIOR: That's all right. What's scurvy?

CARROT: Some disease, I think.

JUNIOR: Like cavities?

CARROT: No, like scabs on the skin.

JUNIOR: Ugh! I'm going to eat lots of fruits and vegetables from now on.

CARROT: So long, Junior, got to hop along. (exit hopping)
(Enter Mister Bread, slowly)

BREAD: Nobody mentioned bread, yet. Bread. We're the staff of life, the heart of the home, the pide of labor.

JUNIOR: And what do you do for me?

BREAD: Why grow, young man, grow! I and Rice and Oatmeal and Cereal and Muffins and Crackers all help you grow up, up, up. I'm very important to your body. Yes sir, very important. (Exit Bread, muttering, "very important")

JUNIOR: You know, Mister Milk, I just realized that every one of your friends is important to me. If I don't eat vegetables, or drink milk, or pass up meat, why some part of my body is going to suffer for it. Maybe even get sick.

MILK: That's right, Junior.

JUNIOR: I'm going to tell my mother that I'm going to eat a little bit of every one of you every single day. (Exits)

MILK: (turning to the audience) That's a smart boy. Are you smart too, boys and girls? What you eat is very important. Try to remember that:

(Song) Milk: I'm for your muscles.

Egg: (pops up) I'm for the glow.

Carrot:(pops up) I'm to make ready.

Bread: (pops up) And I'm to grow.

(all pop down)

JUNIOR: (starting to sing backstage and then enetering)
Eat meat, eggs, fruit, vegetables and bread.
That's how to grow big, Mister Milk said.

ALL TOGETHER: Soooo
One for your muscles
Two for the glow
Three to make ready
And four to grow.

(Curtain)

PUPPET INSTRUCTIONS

JUNIOR

1. Out of Flesh Colored Felt, cut a hand pupput.
2. Out of a Colored Felt, cut trousers and a striped shirt.
3. Stitch clothing to front of hand puppet; then stitch back and front puppet pieces together.
4. Glue on felt eyes, nose and big smile.
5. Out of Yarn (we used red), stitch and glue on ragged hair.

MISTER MILK

1. Drain well and dry an empty ½ gallon milk carton. Staple the spout shut.
2. Glue on a mouth and mustache on the front. For the eyes, use the button eyes purchased at a variety store so they move around.
3. Glue arms with contrast color hands coming out from the sides and legs from the bottom of carton.
4. Take a long, thin, round stick and go in and cut the back of carton--this is how you operate "Mister Milk".

CARLOS CARROT

1. Take a man's white athletic sock and dye it orange.
2. Fold in the toe so it makes a point and stitch closed. Stuff the sock with paper leaving room to put your hand in at the top.
3. On front of sock (stitches in the back), glue on an oval mouth and attach button eyes so they move as he jumps around "full of energy".
4. Take green pipe cleaners and twist them together at the botton to make a stem and bend them in all directions at the top. Stitch this in the carrot above the eyes and where your hand (when in sock) reaches. Your hand holds on to the pipe cleaners and can move them around while you manipulate the puppet.

ELSIE EGG

1. Use a large egg-shaped piece of Styrafoam or make an egg out of papier-mache'.

PUPPET INSTRUCTIONS ....continued.

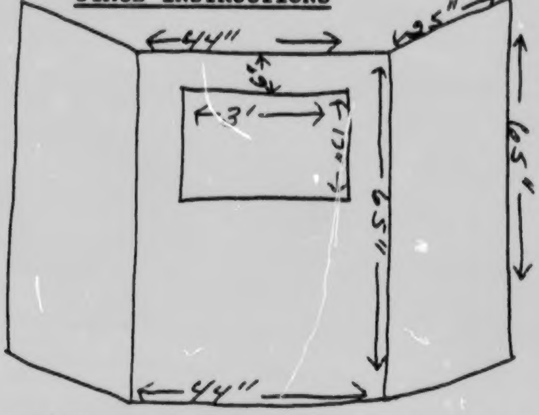
(ELSIE EGG)

2. Using thin, grey yarn, braid a long piece and then glue and wrap it around for hair, ending with a topknot.
3. Paint on large eyes, nose and mouth and rougey cheeks.
4. Out of thin wire, shape "granny" eye glasses and insert into egg.
5. Insert long, thin stick into bottom of egg with which to move her. At the base of stick and egg, tie a frilly bow.

MISTER BREAD

1. Out of square piece of Styrafoam, cut a large bread-shape.
2. Put a brown grosgrain ribbon around the complete outside of bread shape.
3. On the front, glue on eyes, bushy eyebrows, nose and mouth.
4. Insert long, thin stick into bottom of bread. Use this to move puppet.

STAGE INSTRUCTIONS



1. Plywood measuring 3/4" was used for front and panels.
2. Cut center hole according to above measurements.
3. Hinge front panel to side panels.
4. Curtin rod was placed on back. You can use draw curtains or draw by hand.
5. A thin wire was hooked across one side panel to the other. A boys bedroom setting was painted on a piece of material, hemmed and sliped through the wire. This was our backdrop. When we folded the stage for transporting, we simply unhooked one side of the wire.

TRY IT — YOU'LL LIKE IT

(SEND IN EVERY TIME YOUR CHILD TRIES SOMETHING NEW)

I TRIED IT —

NAME ______________________________

FOOD TRIED ______________________________

REACTION (PREFERABLY DIRECT COMMENTS)

I TRIED IT —

NAME ______________________________

FOOD TRIED ______________________________

REACTION (PREFERABLY DIRECT COMMENTS)

I TRIED IT —

NAME ______________________________

FOOD TRIED ______________________________

REACTION (PREFERABLY DIRECT COMMENTS)

I TRIED IT —

NAME ______________________________

FOOD TRIED ______________________________

REACTION (PREFERABLY DIRECT COMMENTS)

I TRIED IT —

NAME ______________________________

FOOD TRIED ______________________________

REACTION (PREFERABLY DIRECT COMMENTS)

San Mateo City Schools, CA Dept. of Ed.

Concept A

Second Grade
Subject Area: Health

2

FOUR WAYS TO HEALTH WITH FOOD

The Milk Group

Behavioral Objective: The student will classify a variety of foods into the milk group and will identify the main function of the milk group as building strong bones and teeth.

Process Objective: Labeling, categorizing, explaining, acquaintance with the development of scientific methods and major themes.

Teacher information: The first of a series of food group lessons is the study of the milk group. The reason is that children are familiar with a wide variety of milk products and can apply the theory of food classification to foods based on prior knowledge of their composition. Whereas milk was studied primarily as an animal product that is beneficial to bone and tooth development in grades kindergarten and one, students in grade two will classify milk products into the milk group based on their food value. They will learn that while all forms of fluid and dry milk belong in the milk group, butter does not due to its high fat content. This will prepare the student to exclude similarly high fat foods, such as corn oil and bacon grease, from the vegetable-fruit and meat groups, respectively.

Materials:

Sound Filmstrip: "Milk Group", from Nutrition Series, Nystrom (SNAC)
Poster: Every day Eat the 3-2-4-4 Way or any other Four Food Group poster. (Project SNAC)
Food pictures or food models (Available from Project SNAC)
Student worksheet - "Circle The Milk Group Foods"- 1 per student
white flash cards 3"x3"-1 per student

Alternate: Balanced Meal Unit for Second Grade, Dairy Council of California

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Vocabulary: milk group, milk, ice cream, cheese, butter, buttermilk, yogurt, protein, calcium, skeleton, nutrient

ACTIVITY

Motivation:

Display the Milk Group section of the poster. Introduce the poster by asking students to name the foods shown.

Show Milk Group filmstrip. Following the filmstrip discuss which foods are in the milk group and how they help the body. Refer to the poster to review foods included in the group.

Development:

1. Give each student a white flash card. Have each student write milk group on the card.

2. Show a series of food pictures and ask students to respond to those foods in the milk group. If a question arises about a food's classification, question the class about why they think that food belongs in the milk group. Is it because it is white? Is it because some milk is added in the cooking? Have students save milk group flash cards for the next lesson.

   Emphasize that foods belong in the milk group only if they have enough of important nutrient called "calcium" to help their skeleton and their teeth.
3. Refer to the poster to discuss the recommended minimum servings(3). Ask students to count the number of servings of milk group foods they eat in one day and report to class.

Evaluation:

Teacher observation of student repsonses to discussion questions, ability to classify milk group foods correctly.

Do the children report that they eat/drink at least the 3 recommended servings of milk group foods daily? Can the children make practical suggestions for change they can make to meet the recommendations?

Additional Activities:

1. Plan a milk and cheese tasting party or food preparation experience. Avoid highly sweetened recipes. Emphasize the basic goodness of milk itself. Have class vote on preference of milk, cheese, and make a graph for milk group favorites.
2. Begin a 4 Food Group Bulletin Board with the milk group. Students can draw pictures or clip from magazines. Real milk group food containers add a three dimensional touch.
3. Drinker-Uppers - Drinker Downers: Make a large chart with each student's name down the side. Across the top write the days in a week. Draw lines across and down to make a grid. Every day for five days have each student draw in a glass of milk for each serving of milk group foods eaten. Discuss the poster. If a child is allergic to milk, the nutrient "calcium which builds strong bones and teeth can be obtained from dark leafy green vegetables, such as kale, soybeans, and in pill or powdered form. Some people who are allergic to milk can still eat aheese, yogurt, kafir, buttermilk, and other milk products.

Additional Resources:

Textbook: Health and Growth: Level 2, page 102, Scott Foresman

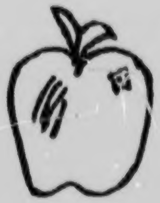
Filmstrips - (Available from District IMC);

"Dairy Products" from Foods We Eat, Coronet (SFS 641.3)

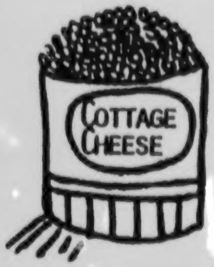
"And This Little Bottle Went to Market"
from Alice in Consumerland,
January Productions, 1974 (SFS 637.2
Cartoon follows the production of bottled milk

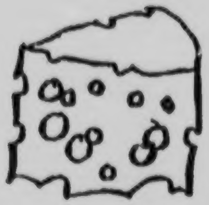
NAME ______________________________

CIRCLE THE MILK GROUP FOODS



APPLE


COTTAGE
CHEESE



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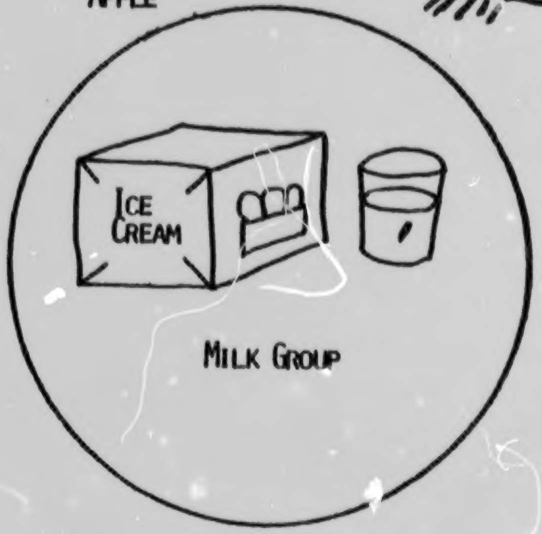
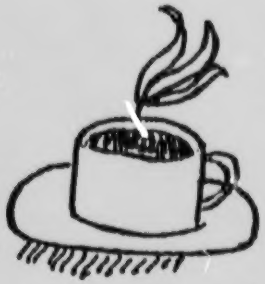
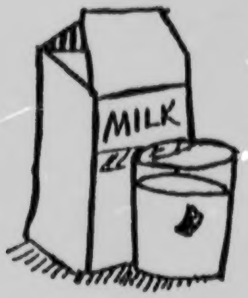


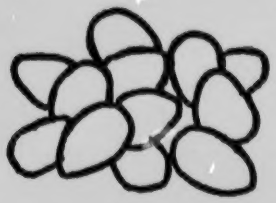
MILK GROUP



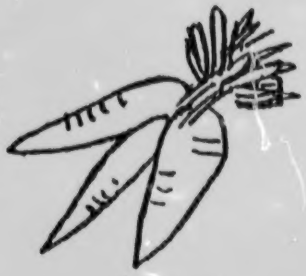
HOT CHOCOLATE



MILK



EGGS



CARROTS

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San Mateo City Schools, CA Dept. of Ed.

FOUR WAYS TO HEALTH WITH FOOD
The Meat Group

Behavioral Objective: The student will name the meat group and classify a variety of meats and meat alternates into the meat group according to the Four Food Group Criteria.

The student will identify growth as the main function of foods in the meat group.

Process Objective: Labeling, categorizing, explaining, acquaintance with the development of scientific methods and major themes.

Teacher Information: This lesson follows the milk group lesson. Teaching strategies are the same.
The Meat Group includes beef, pork, lamb, poultry, fish; eggs; legumes (dried beans dried peas, soybeans, peanuts, nut butters); seeds and nuts.
Recommended servings daily: 2. Major nutrients: protein and iron. Function: protein for growth, iron for healthy blood. Not included: gravy, meat fat.

Materials:
Health and Growth: Level 2, page 101 or
"Every Day Eat the 3-2-4-4 way" Poster
Filmstrip "The Meat Group", Nystrom Nutrition Series (Project SNAC)
Food pictures of meat group foods (meat, eggs, fish, chicken, peanuts, dried beans)
Student worksheet "The Meat Group" - 1 per student
Red Flash Cards 3"x3" - 1 per student

Alternate: Dairy Councils Big Ideas Balanced Meat Unit for Second Grade

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Vocabulary: Meat, fish, poultry, dried beans, dried peas, nuts, protein, growth, muscles

ACTIVITY

Motivation:

Show The Meat Group filmstrip. The students will be familiar with the Nutrition Trio and their presentation. Explain that they are to pay particular attention to the foods that are in the meat group and how they help the body. Follow with a brief discussion of the filmstrip. Write the word "protein" on the board and have students repeat the word aloud. Explain that protein helps in growth and muscle development.

Development:

1. Give each student a red flash card and have them write Meat Group on the card.

Show a series of milk and meat group food pictures or food models. Have students respond to milk and meat group food pictures by raising the appropriate flash cards. Give oral feedback and discuss errors in classification. Have students save flash cards for the next lesson.

2. Have students complete the meat group worksheet.

Evaluation:

1. Have all the students write the name of their three favorite foods from the meat group and the recommended number of meat group servings on their flash cards. Have students volunteer answers. Evaluate responses for accuracy and through discussion and comparison with the food group poster correct any errors.

2. Evaluate student participation in classification and food preparation activities.

3. Do the children eat at least the recommended 2 servings daily from the meat group?

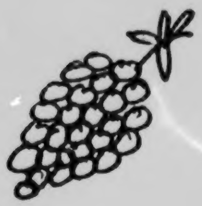
Additional Activities:

1. Continue with Four Food Group bulletin board by adding a Meat Group section. Before a food picture is added have the class "vote" on whether or not is is a meat group food. Put questionable or mixed foods in a bag or box marked "?" for later discussion.

2. Prepare a meat group food in class preferably a meat substitute, such as eggs, beans, lentils, peanut stew, or tafu (bean curd cake). Fro social studies impact select an ethnic recipe and find the country of origin on the glove. For maximum impact, select a recipe from a country represented by a student in class.

NAME ______________________

CIRCLE THE MEAT GROUP FOODS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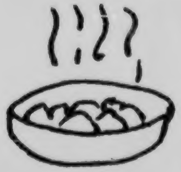
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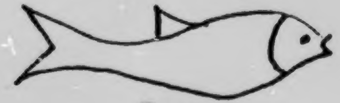
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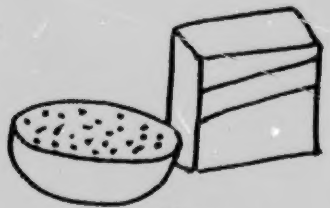
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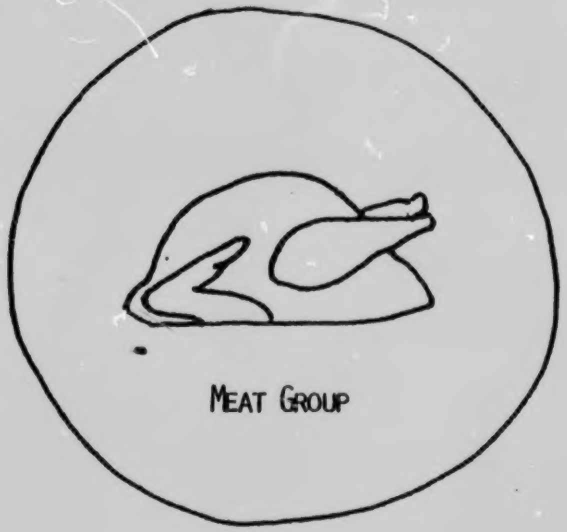
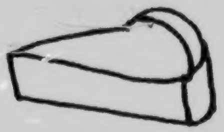

MEAT GROUP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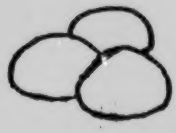
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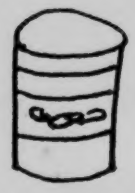
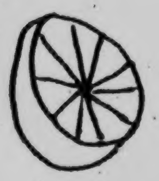
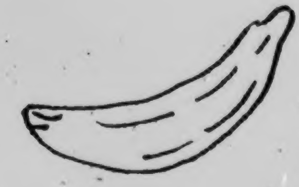

PEANUT
BUTTER


ORANGE


BANANA

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San Mateo City Schools, CA Dept. of Ed.

Concept A

Second Grade
Subject Area: Health

4

FOUR WAYS TO HEALTH WITH FOOD
The Vegetable-Fruit Group

Behavioral Objective: The student will classify foods correctly into the Vegetable-Fruit group according to the Four Food Group Criteria.

The student will identify the main functions of the Vegetable-Fruit group as keeping them healthy.

Process Objective: Labeling, categorizing, explaining, acquaintance with the development of scientific methods and major themes.

Teacher Information: This lesson follows milk group and meat group. Teaching strategies are the same.
The Vegetable-Fruit Group includes most fruits and vegetables. Citrus fruits, tomatoes, potatoes, berries, (for Vitamin C); carrots, broccoli, sweet potatoes, spinach (for Vitamin A); apples, grapes, green beans, green peas, corn. Recommended servings daily: 4. Major nutrients: Vitamins (A and C) and mineral Function of foods: in vegetable-fruit group - overall health maintainence. Not included: high-sugar and high-fat products (gelatin desserts, jam, jelly, pies)

Materials: Health and Growth Text: Level 2, page 100 (Project SNAC)
Poster: Everyday, Eat the 3-2-4-4 way - National Dairy Council
Filmstrip: The Vegetable-Fruit Group from Nystrom Nutrition Series
Food Pictures of vegetables-fruits, milk and meat group foods
Flash Cards "3"x3" - 1 per student (green)
Student worksheet: Vegetable-Fruit Group - 1 per student

Alternate: Balanced Meals Unit for Grade 2 - Dairy Council of Calif.

Vocabulary: fruits, vegetables, vitamins, minerals

ACTIVITY

Motivation:

Display the Vegetable-Fruit panel of the poster. Have students name the foods pictured.

Ask the students to respond to the question "How do you feel about eating vegetables? Fruits? Why?

Introduce the filmstrip. "The filmstrip today is about vegetables and fruits. They belong together in the vegetable-fruit group. What are the name of the food groups we studied earlier?" (milk, meat).

Show the filmstrip. Follow with a discussion of foods included and their function. Refer to poster.

Development

1. Hand out green flash cards and have students write vegetable-fruit group on their cards. Show a combination of vegetable-fruit, milk, and meat group foods one at a time. Name each food aloud and have students respond only with flash cards. If students respond incorrectly say name of the correct food group and put the food picture aside. When all the food pictures have been shown, review the food pictures that were responded to incorrectly.

2. Have students complete the vegetable-fruit worksheet.

3. Ask students to count the number of vegetables and fruits they eat for the next day and report to class. Compare to recommended number of servings (4).

Evaluation:

1. Teacher observation of student responses, ability to complete worksheet.
2. How do the students feel about eating fruits and vegetables?
3. Do children eat the recommended number of fruit-vegetable group foods daily?

Additional Activities:

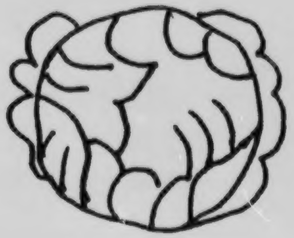
1. Add a vegetable-fruit group section to the bulletin board. (Green background suggested). Have class "vote" on each picture as it is added to place emphasis on each food.

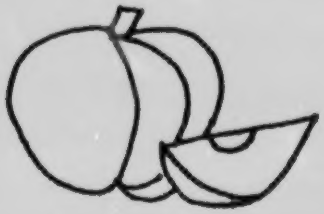
2. Have a tasting experience of fruits and vegetables.

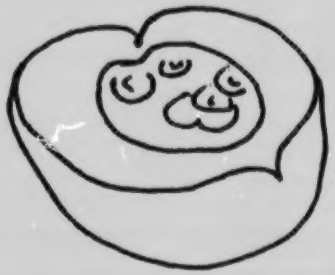
   Suggested: Vegetables with dip
   Fruit Kabobs

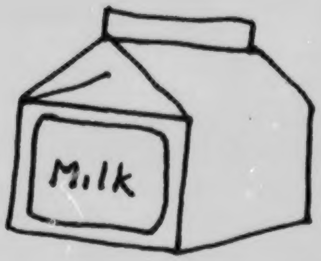
NAME ______________________________

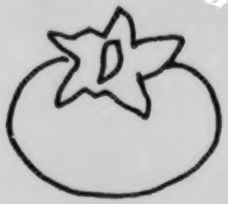
CIRCLE THE VEGETABLES AND FRUITS

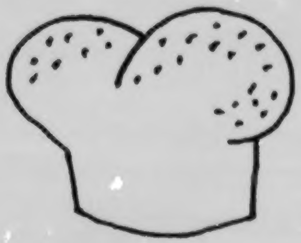


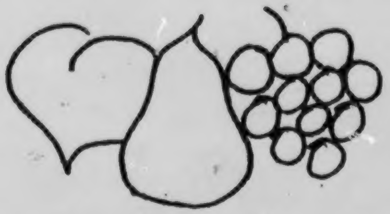


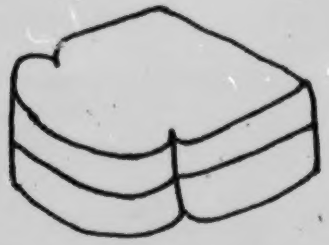


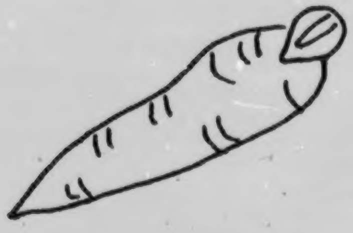












San Mateo City Schools, CA Dept. of Ed.

COLOR THE VEGETABLES AND FRUITS

Concept A

Second Grade
Subject Area: Health

5

FOUR WAYS TO HEALTH WITH FOOD
Bread-Cereal Group

Behavioral Objective: The student will classify foods into the bread-cereal group and identify exceptions.

The student will identify the main function of the foods in the bread-cereal group as "energy" providers.

Process Objective: Labeling, categorizing, explaining, acquaintance with the development of scientific methods and major themes.

Teacher Information: This lesson follows milk group, meat group, vegetable-fruit group. Teaching strategies are the same.
The Bread-Cereal Group includes foods made from grains or flour, for example: Breads, muffins, biscuits, pancakes, tortillas; Cereals, cornflakes, oatmeal, rice; Pastas, (spaghetti, macroni, noodle); Crackers (wheat and graham, saltines) Recommended servings daily: 4 Major nutrients: B vitamins, iron, and carbohydrate. Function of foods: B vitamins and carbohydrate for energy, iron for healthy blood. Not included: cookies, cakes, doughnuts, pies, chips.

Materials:

Poster: "Everyday Eat the 3-2-4-4 Way" - National Dairy Council
Filmstrip: "Bread-Cereal Group" - Nystrom Nutrition Series (SNAC)
Flash cards 3"x3" - 1 per student (brown or yellow)
Student Worksheet: Bread-Cereal Group - 1 per student

Alternate: Balanced meals Unit for 2 grade, Dairy Council of Calif.

Vocabulary: bread, cereals, grains, energy, vitamins, minerals

ACTIVITY

Motivation:

1. Display the Bread-Cereal Group portion of the poster. Have students name foods pictured.

2. Introduce and show the Bread-Cereal Group filmstrip.

3. Follow the filmstrip with a discussion about how bread-cereal group helps us stay healthy. Breads and cereals give energy and are full of vitamins and minerals for a good healthy feeling.

Development:

1. Review the names of the food groups studied previously. (Milk, meat, vegetable-fruit)

2. Tell students to take out the flash cards made for prior activities. Hand out brown or yellow flash cards and have students write Bread-Cereal Group on the card. Discuss reasons for grouping breads and cereals together with these questions:

   How are bread and cereals alike? (All are made from grains)
   What are some names of grains? (rice, corn, rye, oats, barley)

   Explain that cakes, pies, and cookies are also made from grains, but usually have so much sugar in them that they are called "Extras".

3. Show a series of food pictures, including at least five from the bread-cereal group and three each from the milk, meat, and vegetable-fruit groups. Have students respond to all foods by raising flash cards. For incorrectly classified foods, state the name of the food aloud and its food group. Put these cards in a separate pile for later review. Hold misclassified foods up again at the end of the activity until all students classify each food correctly by a show of flash cards. Have students write the names of their three favorite bread-cereal group foods on the flash cards. Save them for the next lesson.

4. Have students complete the Bread-Cereal group worksheet. Add worksheets to nutrition booklet.

5. Ask students to keep a list of bread-cereal foods they eat for one day and add up to see if they had the recommended amount. (4) Refer to poster.

Evaluation:

Observe students ability to classify foods with flash cards and/or worksheet.

Ask how they feel about eating whole grain vs white bread.
Ask how many of the children ate the recommended number of servings from the bread-cereal group yesterday?

Additional Activities:

1. Choose one of the following food experiences:
   a) Taste three types of bread and graph class preference. One bread should be whole wheat, another whole grain.
   b) Make tortillas, in class. Find Mexico on the map.
   c) Make individual loaves of wheat bread.
2. Continue with Four Food Group bulletin board. Add bread-cereal heading and have students draw or cut pictures from magazines.

Additional Resources:

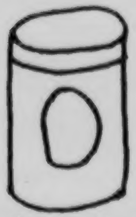
Health and Growth Text: Level 2, page 103

Find the Food Group worksheet

Four Food Group Crossword Puzzle

NAME ______________________

CIRCLE THE BREAD-CEREAL GROUP FOODS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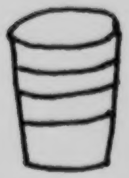
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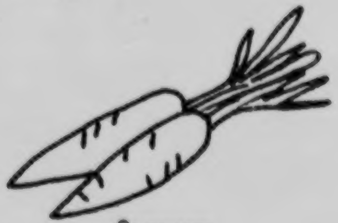
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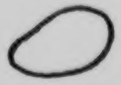
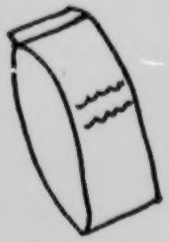
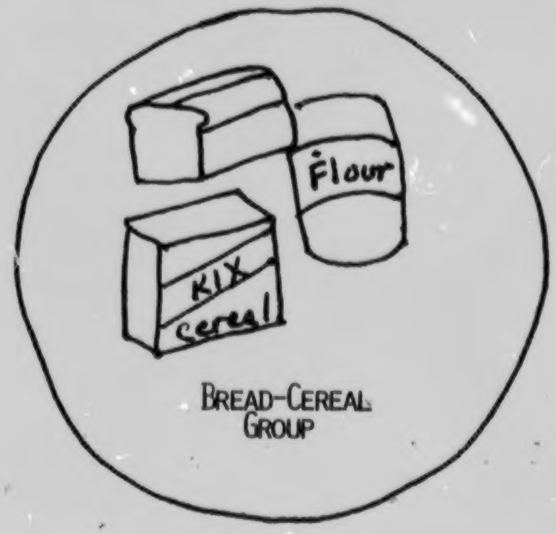
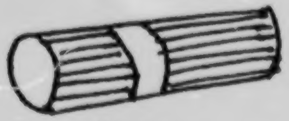
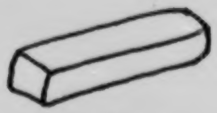
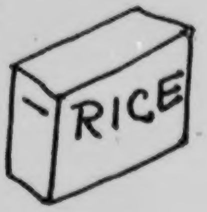

EGG

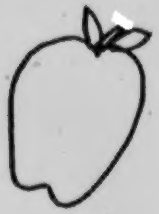

POTATO CHIPS

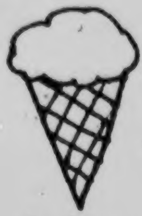

Flour
KIX
cereal
BREAD-CEREAL GROUP


MACARONI


CANDY




APPLE


ICE CREAM

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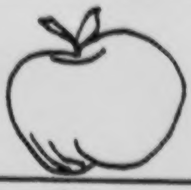
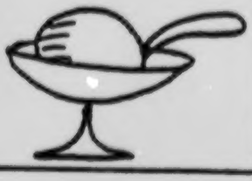
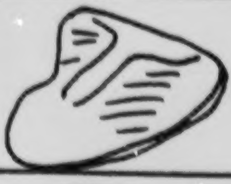
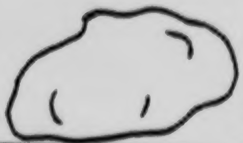
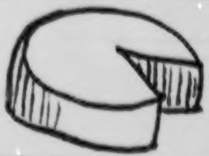
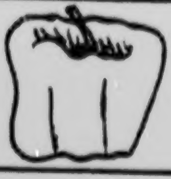
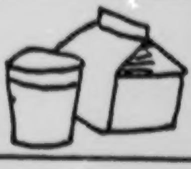
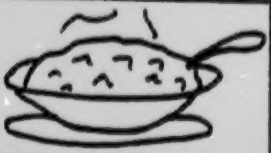
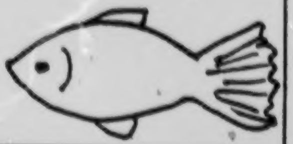
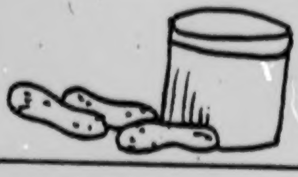
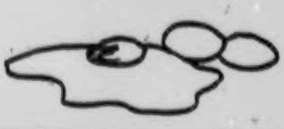
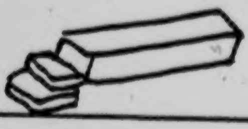
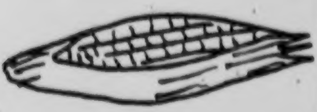
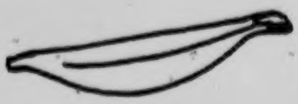
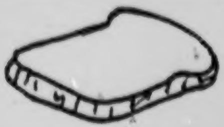
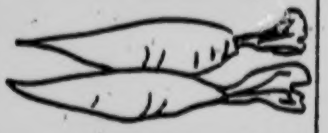
NAME ____________________

4 BASIC FOOD GROUPS

NAME THE CORRECT GROUP FOR EACH FOOD IN THE BOXES TO THE RIGHT.

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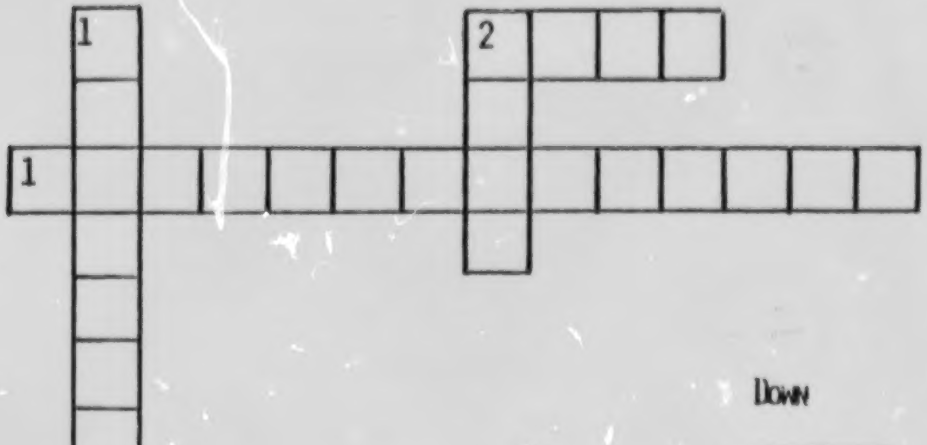
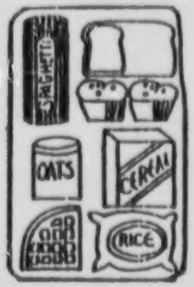
NAME ____________________

FOUR FOOD GROUPS CROSSWORD PUZZLE

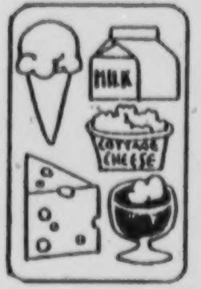


DOWN

1.

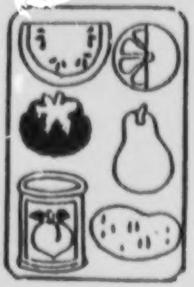

SPAGHETTI
OATS
CEREAL
RICE

2.


MILK
COTTAGE CHEESE

ACROSS

1.



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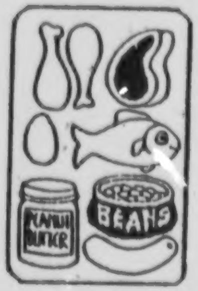

PEANUT BUTTER
BEANS

DIRECTIONS:

FILL IN THE SPACES WITH THE NAMES OF THE FOUR FOOD GROUPS. THE PICTURES ARE YOUR CLUES.

San Mateo City Schools, CA Dept. of Ed.

Concept A

Second Grade
Subject Area: Health

6

HEALTHY MEALS: FOUR FOOD GROUPS

Behavioral Objective: The student will evaluate meals for four food group content.

Process Objective: Skill in communicating in groups, knowledge of and skill in making value judgments.

Teacher Information: A balanced meal has at least one food from each of the Four Food Groups. Extra foods, in moderation, can be included. A meal missing one of the four food groups is not considered a "balanced meal".

Prior skill in classification of foods into the Four Food Groups and extras is required.

Materials: Food pictures of foods from all Four Food Groups (your own collection)
"What's Missing Here" worksheet - 1 per student
paper plates or construction paper, magazines, scissors, 1 ruler,
1 glass or jar and 2 coins of same denomination.

Vocabulary: Balanced

ACTIVITY

Motivation:

1. Demonstrate the concept of "balance" with a ruler laid across a glass so that each end is equal distance from the center of the glass. Weight the ends of the ruler with coins. Remove one coin, causing the ruler to become unbalanced and tip off the glass. Ask the children to explain what happened.

2. Introduce the definition of a balanced meal (a food from each group). Show several combinations of foods which make a balanced meal and have students verbally classify each food.

Development:

1. Select several food picture combinations that omit one or more food groups. Discuss which group is missing and what could be added.

2. Give a "What's Missing Here?" worksheet to each child to complete. Go over answers orally. Allow child to correct errors and to explain reasons for answers. Have students describe their own balanced meal. Use additional worksheets as needed to reinforce evaluation skills.

3. Have children cut magazine pictures to plan a balanced meal on a paper plate or a poster.

Evaluation:

Ask each child to write a "balanced meal" he/she would like to have served.

Additional Activities:

Have the students complete as many of the following worksheets as you feel is necessary to reinforce the lesson:

1. "Well Balanced Breakfast"
2. "A Balanced Meal has All 4 Food Groups"
3. "Which Food Group is Missing"
4. "X Marks the Spot"

Additional Resources:

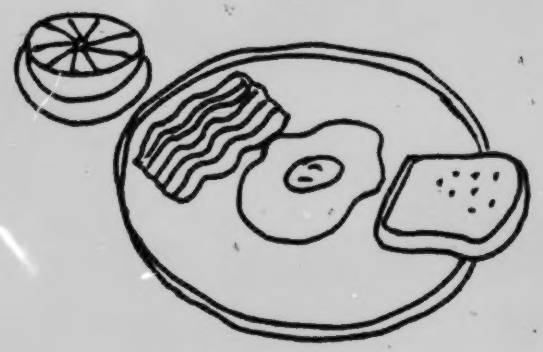
Energy menu - balanced breakfast (from Cling Peach Advisory Board)

Balanced Meal Unit for Grade 2
Dairy Council of California
(a 2 week classroom unit on Balanced Meal Selection)

NAME ______________________

WHAT'S MISSING HERE?

HERE ARE PICTURES OF THREE MEALS. WHICH FOOD GROUP IS MISSING? ON THE LINE BELOW EACH MEAL, WRITE THE NAME OF THE MISSING FOOD GROUP. THEN PLAN YOUR OWN BALANCED MEAL.



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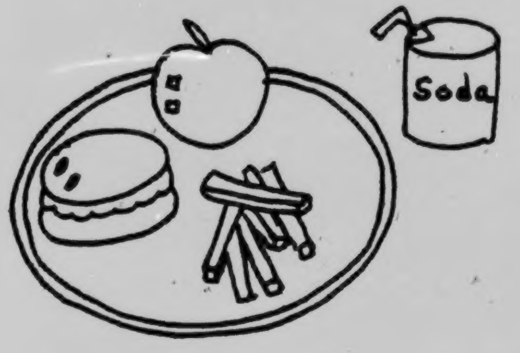
BREAKFAST



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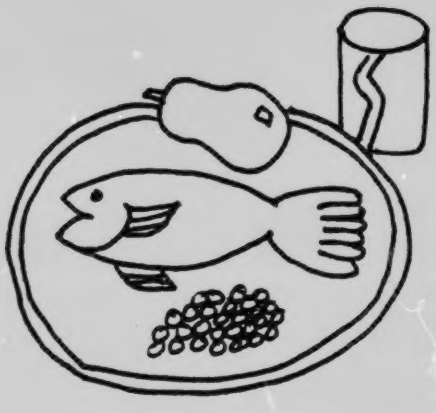
LUNCH



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DINNER

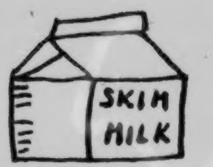
WRITE OR DRAW A MEAL WITH

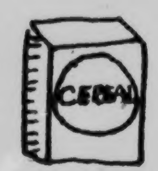
ALL FOUR FOOD GROUPS.

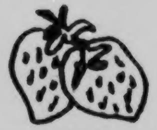
San Mateo City Schools, CA Dept. of Ed.

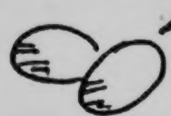
NAME ______________________

WELL BALANCED BREAKFAST



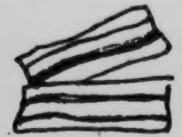



STRAWBERRIES

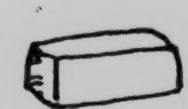

HARD COOKED EGGS

PEACH

PEANUT BUTTER


BACON

HOT CEREAL


BUTTER

ORANGE JUICE

HOT CHOCOLATE

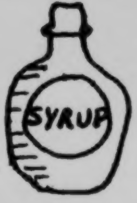
TOAST

LOW FAT MILK

GRAPEFRUIT

SAUSAGE

FRENCH TOAST



BREAD

BANANAS

HAM

SCRAMBLED EGGS

BISCUIT

ABOVE ARE PICTURES OF FOODS THAT CAN BE EATEN FOR BREAKFAST. MAKE FOUR WELL BALANCED BREAKFASTS USING AS MANY FOODS AS POSSIBLE.

	MENU 1	MENU 2	MENU 3	MENU 4
MILK				
FRUIT OR JUICE				
BREAD OR CEREAL				
*MEAT, ETC.				
**OTHER				

*MEAT AND MEAT ALTERNATES (PEANUT BUTTER, EGGS, CHEESE) DO NOT HAVE TO BE EATEN EVERY DAY FOR BREAKFAST, BUT SHOULD BE ADDED AS OFTEN AS POSSIBLE FOR GROWTH AND ENERGY.

**ADD AS DESIRED FOR VARIETY AND TO MAKE THE BREAKFAST MORE APPETIZING.

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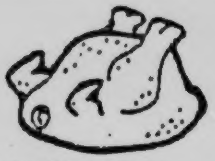
NAME ______________________

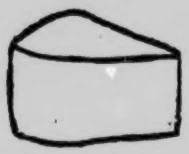
A BALANCED MEAL HAS ALL 4 FOOD GROUPS

WRITE A BALANCED MEAL.

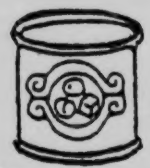
CHOOSE FROM THE FOODS BELOW.



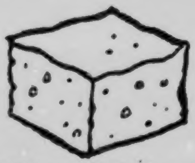
CHICKEN



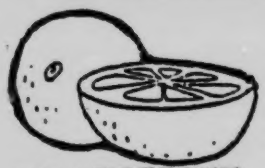
CHEESE



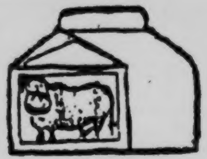
FRUIT COCKTAIL



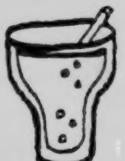
CORN BREAD



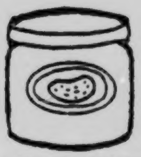
GRAPEFRUIT



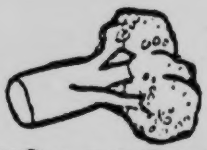
MILK



COLA



PEANUT BUTTER



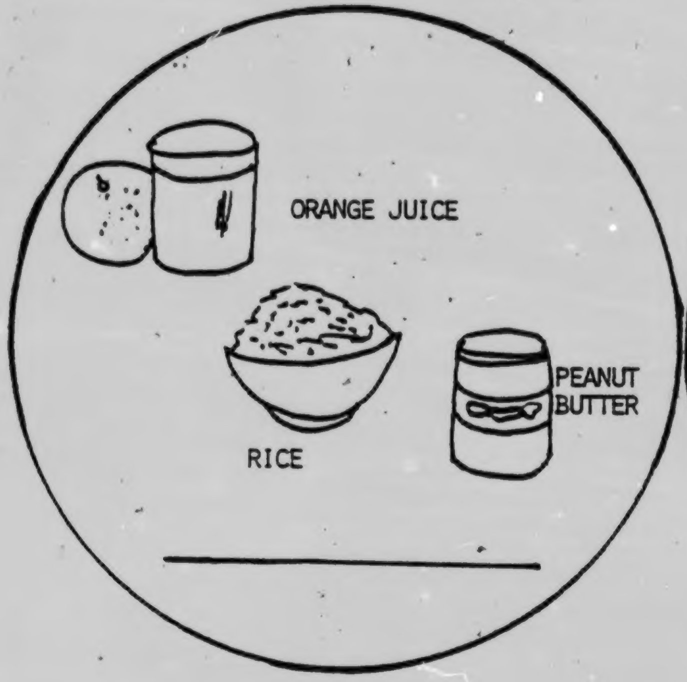
BROCCOLI

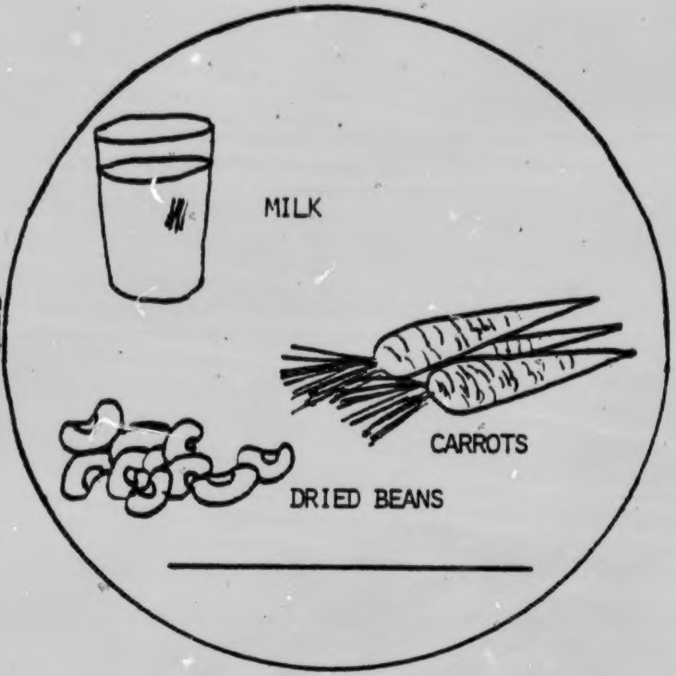
San Mateo City Schools, CA Dept. of Ed.

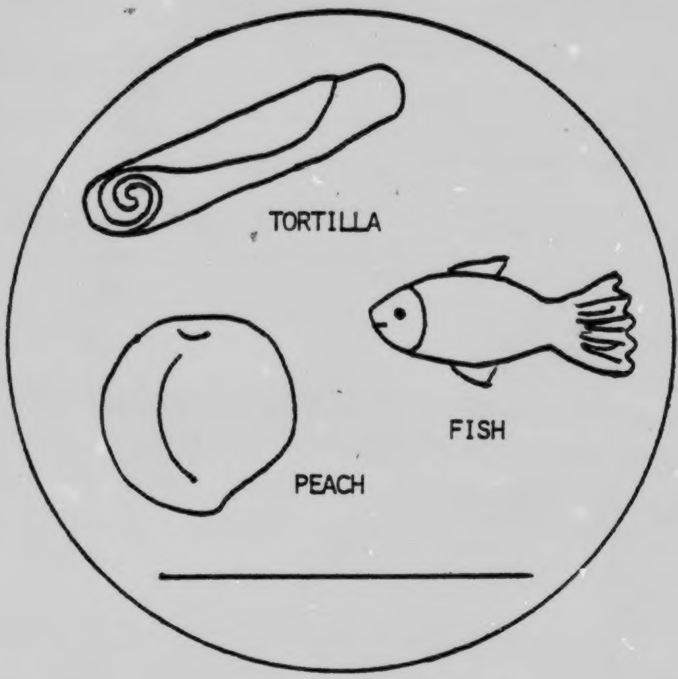
NAME ______________________

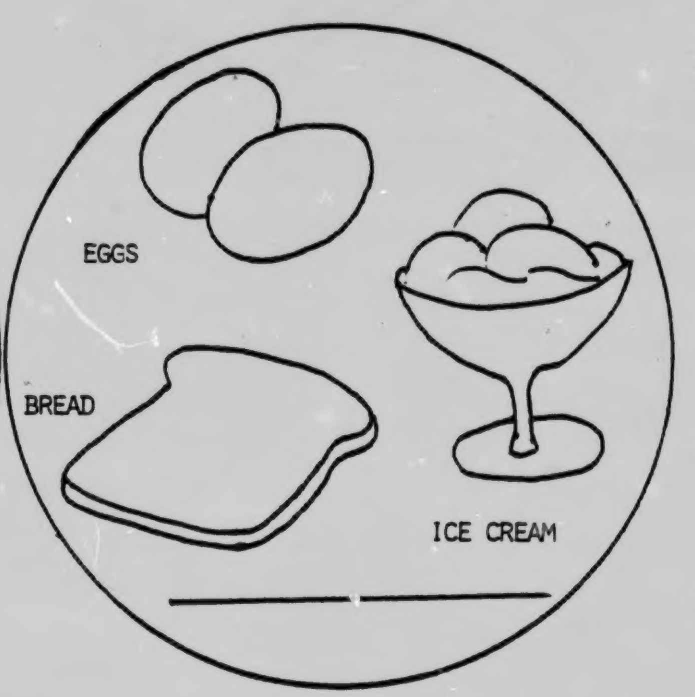
WHICH FOOD GROUP IS MISSING

PLACE THE NAME OF THE MISSING FOOD GROUP ON THE LINE IN EACH CIRCLE.


ORANGE JUICE
RICE
PEANUT BUTTER


MILK
CARROTS
DRIED BEANS


TORTILLA
FISH
PEACH

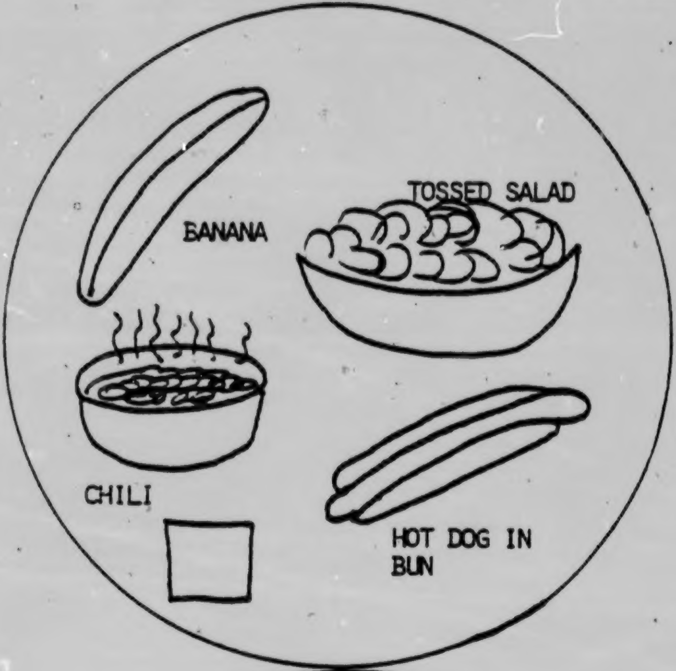

EGGS
BREAD
ICE CREAM

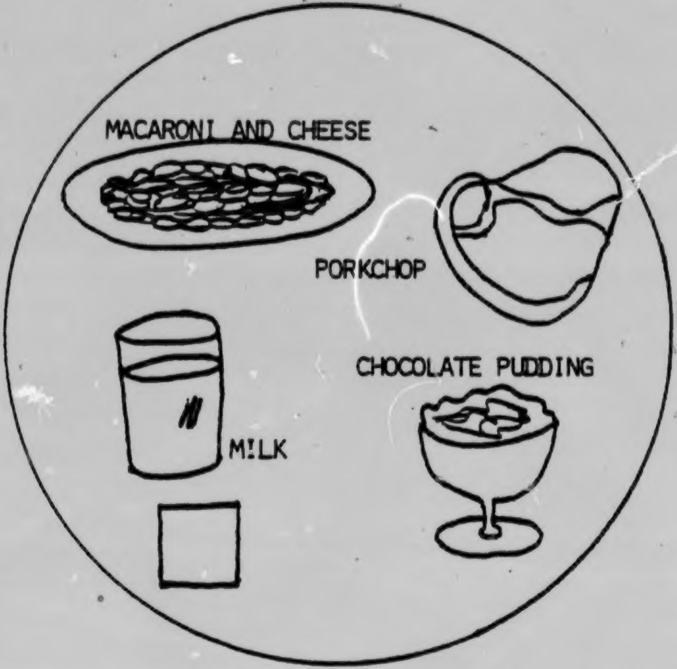
San Mateo City Schools, CA Dept. of Ed.

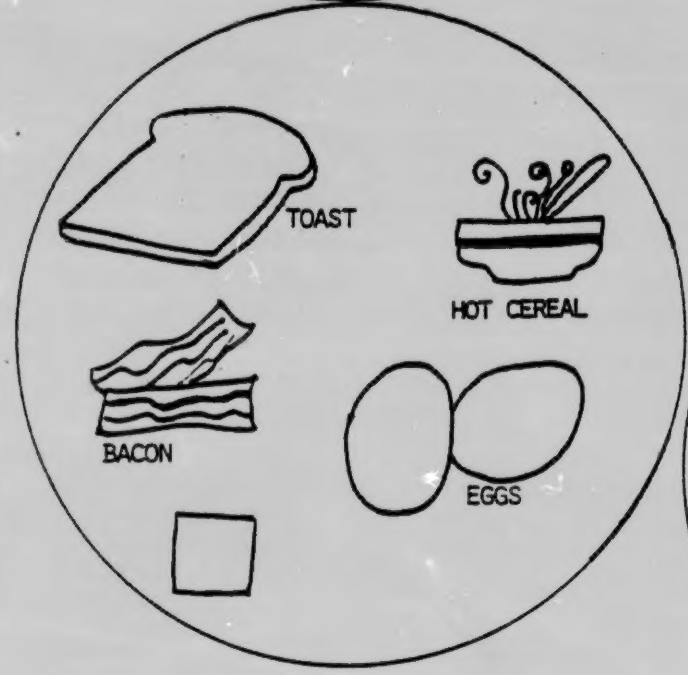
NAME____________________

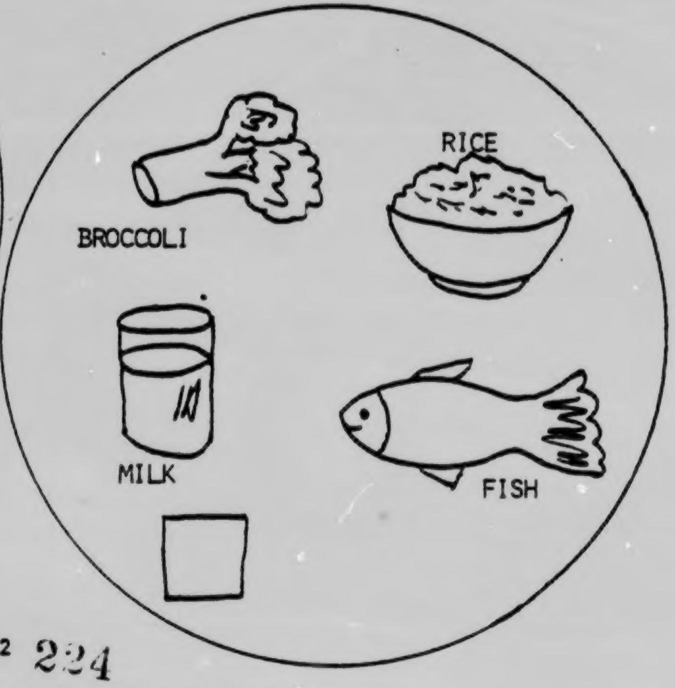
"X" MARKS THE SPOT

PUT AN "X" IN THE BOX THAT SHOWS ALL 4 FOOD GROUPS.


BANANA
TOSSED SALAD
CHILI
HOT DOG IN BUN
☐


MACARONI AND CHEESE
PORKCHOP
MILK
CHOCOLATE PUDDING
☐


TOAST
HOT CEREAL
BACON
EGGS
☐


BROCCOLI
RICE
MILK
FISH
☐

San Mateo City Schools, CA Dept. of Ed.

Second Grade
Subject Area: Health

7

FOUR WAYS TO HEALTH WITH FOOD
SCHOOL LUNCH

Behavioral Objective: The student will evaluate school "Type A" lunches and bag lunches using the four food groups as a guide.

The student will plan a "Type A" lunch using the four food groups as a guide.

Process Objective: Applying food group classification skills to real life situations; classifying, categorizing, practicing food classification skills.

Teacher Information: The lunch area at school is a potential learning environment in two areas: 1) the lunch as a model of a balanced meal; 2) courtesy and cleanliness. School Lunches are an ideal meal to evaluate and plan according to the four food group criteria. It is available everyday and is vitally important to the health and well-being of the students.

The "Type A" school lunch is a "balanced" meal, i.e. it has one food from each of the four food groups. The "Type A" lunch conforms to federal guidelines for content and serving size which assure that each lunch contains one-third (33%) of the child's recommended nutrient intake, or one third of the R.D.A. for a school aged child.

"Type A" lunch requirements:
- Milk group - 8oz of fluid milk
- Meat group - 2oz of meat or meat substitute
- Vegetable/fruit group - 3/4 cup of vegetable and fruit (one source must be high in vitamin C)
- Bread group-1 serving of enriched or whole grain bread

Materials: "What's for Lunch?" worksheet
"Type A Lunch" worksheet
"Type A" lunch menu writing worksheet
"How food helps your body" Pretest - 1 per student
Cardboard food models
"Lunch Menu Contest"

Vocabulary: Type A lunch

ACTIVITY

Pretest: Have each student complete the test.

Motivation:

Invite a nutritionist from the school or a cafeteria cook manager to introduce the concept of a balanced lunch and explain why such lunches are made available to all students. The discussion should include:

1. A description of the Type A lunch and consideration made in the planning e.g. likes and dislikes, nutrition, color, cost, and transportation.
2. Discussion of the food groups included.
3. Explanation of the function of each food group, and the fact that all food must be eaten in order to get a balanced lunch.
4. An invitation for all students to write a Type A lunch for a menu contest.
5. A question-answer session in which children ask the questions of the guest.
6. A discussion of the importance of courtesy and cleanliness in lunch room to make lunchtime enjoyable.

Development:

1. For two or three days have students write down after lunch everything they ate and drank on a "what's for lunch?" worksheet. Ask for a show of hands to see how many ate a balanced lunch, i.e. at least one food from each group. Ask for volunteers to write their lunch menu on the board for class evaluation.
2. If food models are available, students can plan Type A lunches with the models for display.
3. On the 4th day ask students to write a school lunch menu for the cafeteria. Each menu should include the four food groups. The milk group food must be fluid milk and the bread-cereal group must be some form of bread or roll. Vegetable and fruit must be included, too. Use the "Lunch Menu Contest" worksheet.
4. Collect entrees and either submit to the Food Service Director or Nutrition Education Specialist for judging or judge within class to select a winner.

Evaluation:

1. Have each student complete a "Type A Lunch" worksheet.
2. Evaluate students Type A menus.
3. Ask students to draw a balanced bag lunch menu and write the food group under each picture.
4. Ask the children if they are eating some of each food group at every meal.

Additional Activities:

Field Trip to School Kitchen

Contact the Food Service Supervisor to arrange for a tour of the production kitchen to see the Type A lunch preparation.

Write A Letter

Write a letter to the school cooks or food service supervisor to tell about your favorite food. Invite the cook to come to class to tell about his/her job or ask if your class can visit the kitchen.

Food Waste Study

Have one group of students who eat lunch in the cafeteria watch to see what kinds of foods are not eaten by many students. Which foods are eaten the best? Have a group of brown bag lunchers do the same. After lunch have the groups report orally on what they learned. Remind them not to use students names in the report.

Discuss why students think food is thrown away. Is this good or bad? How can they let the cook know how they feel about lunch?

Additional Worksheet

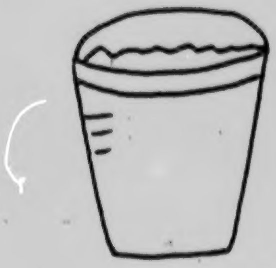
"Best Foods for a Good Lunch"

"Four Food Groups"

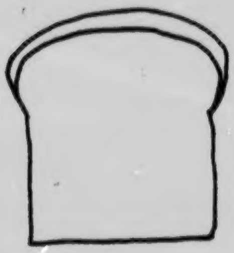
PRETEST - LEVEL 2 - LESSON 7 NAME________________________

HOW FOOD HELPS YOUR BODY

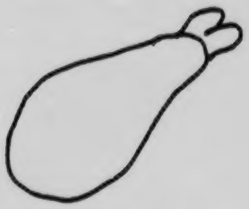
DIRECTIONS: DRAW A LINE FROM THE FOOD TO THE PICTURE THAT SHOWS HOW IT HELPS YOUR BODY.



MILK

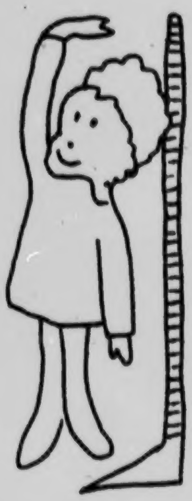


BREAD

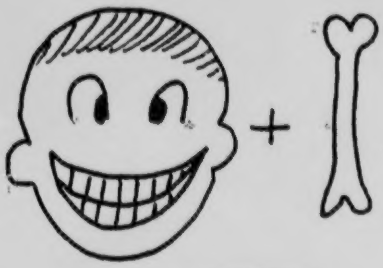


MEAT

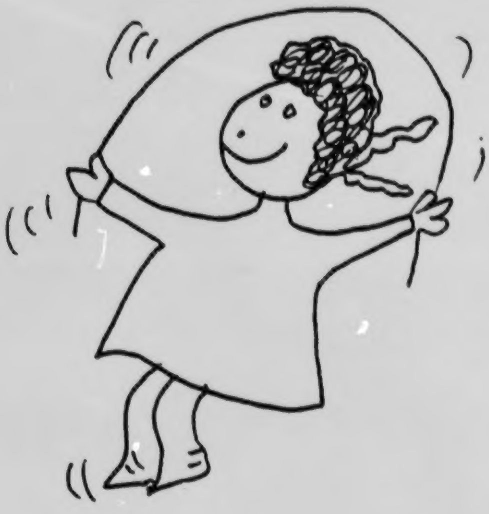
GROWING



TEETH AND BONES



ENERGY



NAME ____________________

WHAT'S FOR LUNCH ?

12
1
2
3
4
5
6
7
8
9
10
11

DIRECTIONS: WRITE EVERYTHING YOU HAD TO EAT AND DRINK FOR LUNCH TODAY.

CIRCLE THE RIGHT ANSWERS.

1. DID YOU HAVE A FOOD OR DRINK FROM THE MILK GROUP? YES NO
2. DID YOU HAVE A FOOD FROM THE MEAT GROUP? YES NO
3. DID YOU HAVE A FOOD FROM THE VEGETABLE-FRUIT GROUP? YES NO
4. DID YOU HAVE A FOOD FROM THE BREAD-CEREAL GROUP? YES NO
5. DID YOU EAT A BALANCED MEAL WITH ALL OF THE FOUR FOOD GROUPS? YES NO

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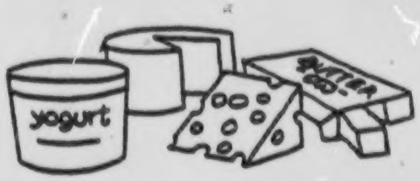
NAME________________________

TYPE A LUNCH

1. CIRCLE THE TYPE A LUNCH.

HAMBURGER ON A BUN	JELLY SANDWICH
CARROT & CELERY STICKS	POTATO CHIPS
APPLE	CAKE
MILK	SOFT DRINK



2. IF YOU HAD A CHOICE, WHICH LUNCH WOULD YOU CHOOSE FOR THE BEST NUTRITION (HEALTH)? CIRCLE 1.

LUNCH 1	LUNCH 2
HAMBURGER ON A BUN	JELLY SANDWICH
CARROT & CELERY STICKS	POTATO CHIPS
APPLE	CAKE
MILK	SOFT DRINK

3. LIST THE 4 FOOD GROUPS IN THE TYPE A LUNCH.

1. ________________________
2. ________________________
3. ________________________
4. ________________________

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NAME ____________________

LUNCH MENU CONTEST

RULES: WRITE A "TYPE A" LUNCH MENU THAT HAS ALL THESE PARTS:

1. MAIN DISH (MEAT-PROTEIN)
2. VEGETABLE (RAW OR COOKED)
3. BREAD OR ROLL
4. FRUIT
5. CARTON OF MILK

IF YOUR MAIN DISH IS A SANDWICH, BURGER OR PIZZA, THE BREAD IS PART OF THE MAIN DISH.

MY MENU

DOES YOUR MENU HAVE THE FIVE PARTS?

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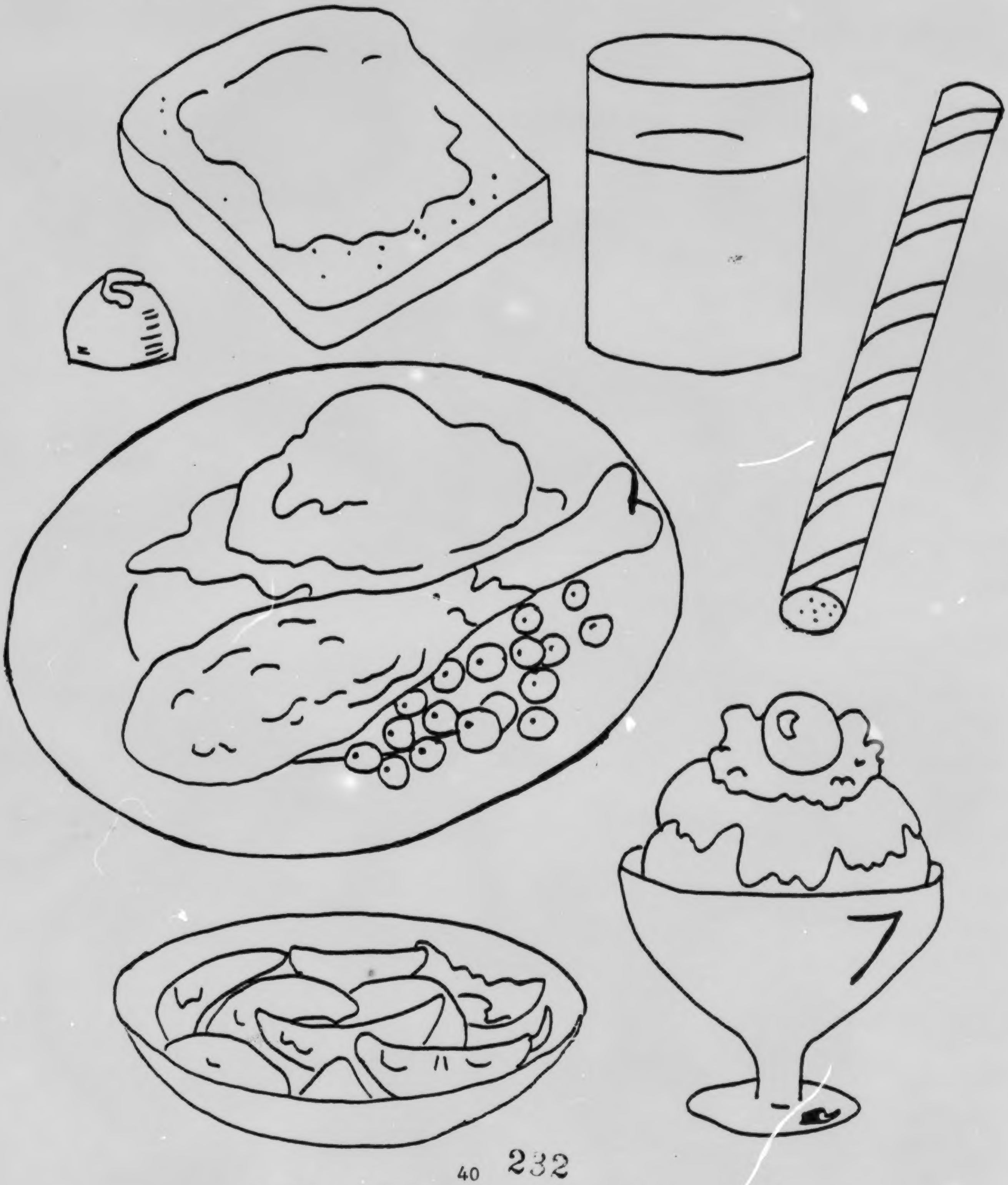
NAME ______________________________

BEST FOODS FOR A GOOD LUNCH

CIRCLE THE 4 BEST FOODS BELOW FOR A GOOD LUNCH.



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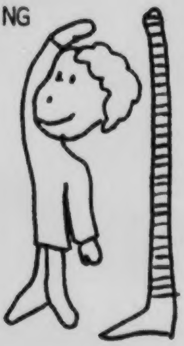
NAME________________________________

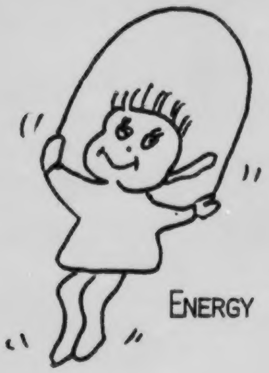
FOUR FOOD GROUPS

DIRECTIONS: MATCH THE FOOD GROUP TO THE JOB IT DOES IN YOUR BODY.

GROWING

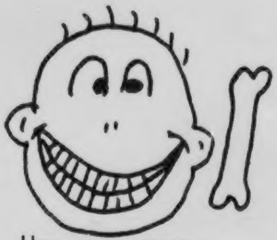


BREAD - CEREAL GROUP



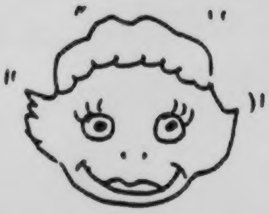
ENERGY

MEAT GROUP



HEALTHY TEETH

VEGETABLE - FRUIT GROUP



FEELING HEALTHY

MILK GROUP

San Mateo City Schools, CA Dept. of Ed.

Concept B, D, A

Second Grade
Subject Area:
Social Studies.
Math
Health

8

TELEVISION DETECTIVE

Behavioral Objective: The student will evaluate television food commercials for nutritional value based on the Four Food Group system.

Process Objective: Understanding the use of sources of information, understanding factors that shape human behavior; skill in analysing personal concerns, commitment to humanitarian ideals, ability to assume different roles, skill in applying concepts, skill in seeing alternative points of view.

Teacher Information: Children see between 7000 - 12000 TV Commercials yearly prior to the age of 12. Most of the foods are high in sugar such as presweetened cereals, snack cakes, candy and soft drinks. This lesson will lead children to understand that most advertised foods do not belong to the four food groups, use tricks to influence the television watcher to buy, and are usually high in sugar. This activity can be used as a basis for a discussion of which foods made from grains are sugary. and are therefore "extras" such as cakes, cookies, pies.

Materials: Tape recorded food ads (recorded from TV) (Saturday AM best)
"Television Detective" Activity Sheet - 1 per student

Vocabulary: commercials, advertising, detective

Preparation: Record from three to ten children's food commercials from T.V.

ACTIVITY

Motivation:

Play the tape of the commercials. See how many children can identify the product and describe the action. Ask the children how they feel about commercials. Do they believe them? Enjoy them? What are commercials for?

Development:

Discuss with class how they feel about commercials. Do they think commercials are good or bad? Should they ask their parents to buy food advertised on TV? How do they get their parents to buy certain things?

Give each child a homework assignment - "Television Detective". Have children count commercials and report the number they saw and what was advertised. Make a chart to show when most food commercials are shown and the kinds of food shown. (There are fewer children's ads in the evening.) Make a Four Food Group chart and keep track of the foods advertised from each basic group and extras. To further point out the high number of sweetened bread and cereal products advertised, divide the Bread-Cereal Group into "sweet" and "not sweet". Most Advertised products in this group will be sweet. Graph the data and display it in the classroom. (Directions attached).

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Evaluation:

Ask the children to write a letter to the teacher telling her what they learned from this activity and what they intend to do about it.

Additional Materials:

Filmstrips "Catch a Commercial" from Alice in Consumerland, Dist. IMC.

"The Commercial" from You, the Consumer, Dist. IMC.

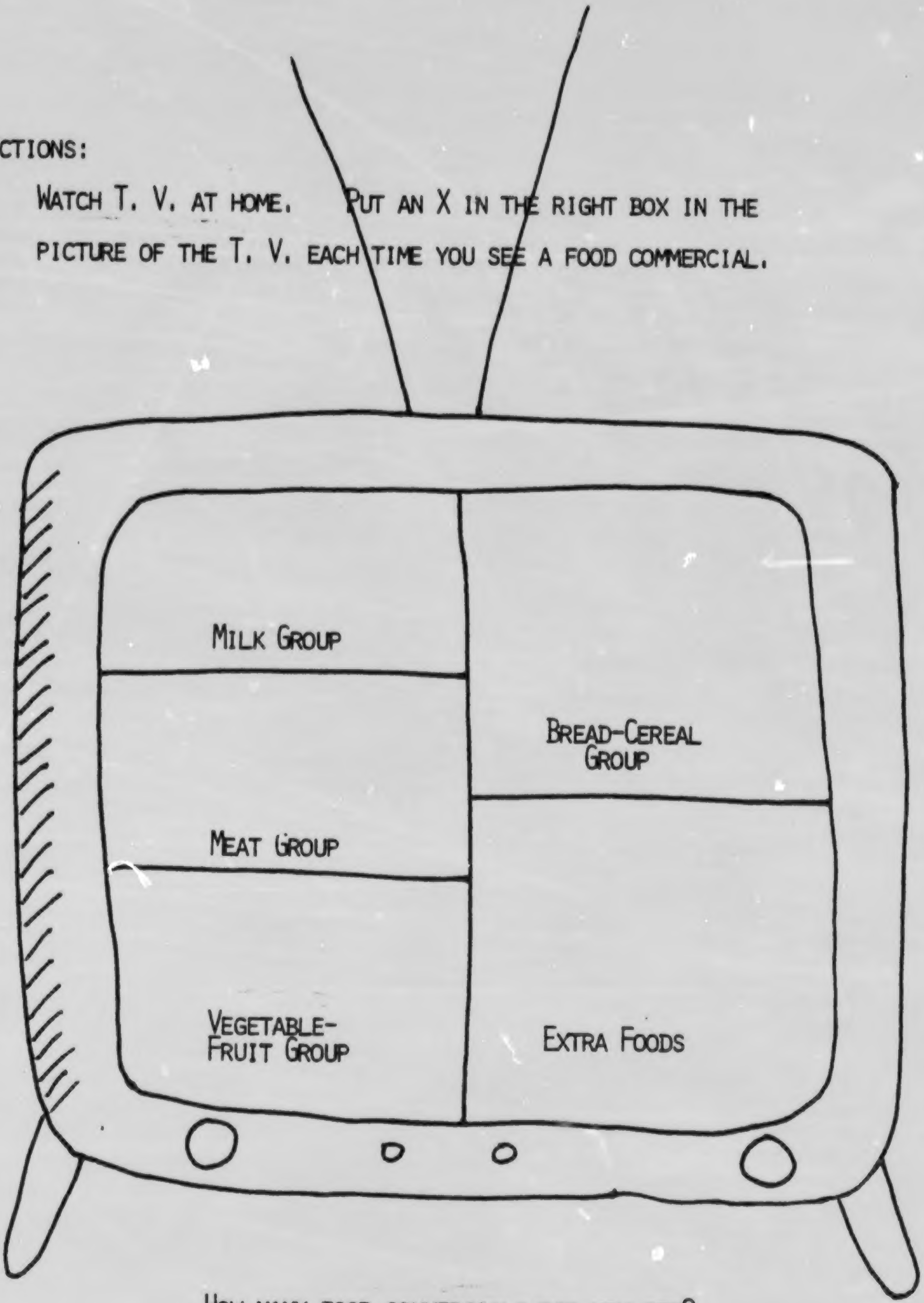
Film: "Seeing Through Commercials."
16 MM - County IMC rental

NAME ______________________

TELEVISION DETECTIVE

DIRECTIONS:

WATCH T. V. AT HOME. PUT AN X IN THE RIGHT BOX IN THE PICTURE OF THE T. V. EACH TIME YOU SEE A FOOD COMMERCIAL.


MILK GROUP
MEAT GROUP
VEGETABLE-FRUIT GROUP
BREAD-CEREAL GROUP
EXTRA FOODS

HOW MANY FOOD COMMERCIALS DID YOU SEE?

San Mateo City Schools, CA Dept. of Ed.

GRAPH TELEVISION FOOD ADS

This activity can be an on-going activity to build a graph of the food groups advertised on television.

The majority of advertisements aimed at children will be from the Bread-Cereal Goups of foods and from "extras", those foods with little nutritional value. This graph activity will allow the children to discover this by the visual representation of the frequency of such advertisements.

DIRECTIONS FOR TELEVISION ADVERTISING GRAPH

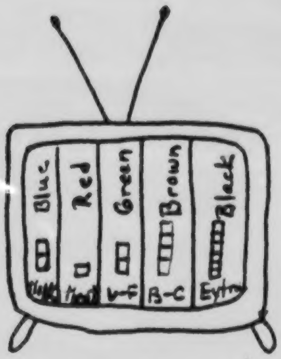
Materials needed:
- Large piece of brown construction paper for TV frame
- Large piece of gray or white paper for TV screen
- 3 black circles for TV knobs.
- String or strips of black construction paper for TV antennae
- 30 each of the following color paper squares 1" square (blue, red, brown, green, black)
- Rubber cement or paste

To Make the Television

1. Cut a frame from the brown paper. The interior of the screen should be at least 22" long and 16" high.
2. Cut the screen out of the white or gray paper and place under the edge of the frame. Write the name of the Four Food Groups and "Extras" across screen bottom.
3. Add "knobs" and "antennae" and "legs"
4. Add a title reading "What Food Groups are on TV Ads?"

TO Build the Graph

1. Have each child name a food he/she saw advertised on TV and name the food group the food belongs to.
2. Let each child choose a colored square to represent the food group and paste or pin the square over the name of the appropriate food group.
3. Discuss the difference in the number of food groups advertised and the reasons for this. (Advertisers know that boys and girls like sweet and crunchy foods so they advertise them most often. They want to make a lot of money)



San Mateo City Schools, CA Dept. of Ed.

Concept E, A

Second Grade
Subject Area: Health

NUTRITIOUS PARTIES

Behavioral Objective: The student will name a variety of delicious and nutritious foods that might be served at a party.

Process Objective: Flexibility in ideas; openmindedness with respect to new situations; ability to see new points of view and their rationale.

Teacher Information: Parties are too often thought of as a time to eat foods of high calorie and low nutrient content. In this lesson children will discover that there are many nutritious alternatives to candy, cupcakes, punch, and cookies. They can also learn that food tasting parties are a good way to entertain. Finally, children will recognize that nutritious snack foods are tasty and delicious, too.

Materials: Parent letter, "Your Invited"
For celery wagons:
- Celery - cut 2" long
- Carrots - cut into "wheels"
- Cottage cheese or peanut butter (to fill the wagons)
- Raisins
- Paring knives
- Spreading knives

(Other foods for party)

Vocabulary: nutritious, delicious

ACTIVITY

Motivation:

Explain to the class that there will be a party. What kind of party will it be? It will be a fun, nutritious party. Boys and girls will be able to prepare and taste fresh fruits and vegetables.

Ask the children to name party foods that are nutritious (good for you). Listen to the replies to determine if the students understand the possibilities of nutritious foods that could be served at a school party.

Development: - Select 1 or more

1. Wagon Train Party: Have the students make "Celery Wagons". Discuss the foods represented in the celery wagons. The children may want to make decorations to go with the western theme of the party.

2. Have a Fruit Tasting Party with a piece of fruit each child brings from home. Combine the fruits for a large party salad to make the event a festive occasion.

3. Plan a Parent Party. Have the children suggest foods that can be prepared that are delicious and nutritious. After the children have decided on the foods to be served, make a copy of the parent letter with the appropriate words.

The children may want to make party decorations.

Evaluation:

Ask the children to name a variety of foods that are delicious and delicious that can be served at a school party.

Additonal Activities:

Party Punch: The children may not be able to think of any substitute for soda pop. To make a non-soda pop party punch, combine fruit juices with soda water for "Fizzy-Fruit Punch."

Halloween Party: No matter what the time of year, a Trick or Treat party can be planned for class. Alternates to candy can be served as Treats (apples, oranges, radish roses, nuts, seeds, granola)

Additional Resources:

Filmstrip: "The Fruit and Vegetable Tasting Birthday Party". McGraw Hill, 121 Avenue of the Americas, New York.

(available from Food and Nutrition Information Center FNIC on free loan)

"The Tasting Party" Encyclopedia Britannica (available from FNIC on free loan)

"The Snacking Mouse." The Polished Apple, 3742 Seahorn Drive, Malibu, CA. 90265 (Available from Project SNAC)

Recipes:
"Goblin Cookies"
"Clown Face Salad"
"Raggedy Ann Salad"

YOU'RE INVITED

TO

IT'S NUTRITIOUS - IT'S DELICIOUS

DEAR ______________________,

PLEASE COME TO THE NUTRITIOUS-DELICIOUS PARTY AT SCHOOL ON

____

DAY DATE

____

TIME

WE WILL BE SERVING NUTRITIOUS-DELICIOUS SNACKS FROM THE FOUR FOOD GROUPS.

YOUR CHILD,

____

San Mateo City Schools, CA Dept. of Ed.

RECIPES

The following collection of recipes and letters home are to be used as needed. Foods for festive occasions can be healthy foods made from nutritious ingredients in place of the customary foods high in sugar content. Taste sometimes become dulled by artificially flavored foods so that natural flavors may not be enjoyed as much at first.

Served to healthy children when they are hungry, and served often enough to permit tastes to adapt to unfamiliar sensations, nutritious party foods can replace cakes, cookies, and chips which provide more salt, fat, and sugar than is recommended for good, balanced nutrition.

DEAR________________________,

TODAY WE MADE THIS RECIPE AT SCHOOL. IT WAS SPECIAL TO CELEBRATE HALLOWEEN.

GOBLIN COOKIES

1 CUP MASHED PUMPKIN
1 EGG
1/3 CUP OIL
½ CUP HONEY
1½ TSP. CINNAMON
½ TSP. GINGER
¼ TSP. ALLSPICE
1½ CUPS WHOLE WHEAT FLOUR
¼ CUP SOY FLOUR
½ TSP. SALT
2 TSP. BAKING POWDER
RAISINS

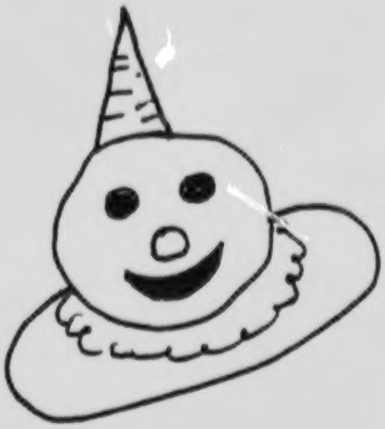
OIL THE COOKIE SHEET. MIX FIRST 7 INGREDIENTS. MEASURE REMAINING INGREDIENTS (EXCEPT RAISINS) AND ADD TO PUMPKIN MIXTURE. MIX WELL. DROP BY TEASPOONSFUL ON COOKIE SHEET. DECORATE WITH RAISINS. BAKE AT 375 FOR 15 MINUTES.

LOVE,

____

DEAR________________________,

WE HAD FUN AT SCHOOL TODAY. HERE IS WHAT WE MADE.



CLOWN FACE SALAD

SHAPE A ROUND BALL OF COTTAGE CHEESE. USE A SLICE OF BANANA FOR THE NOSE, SLICE OF APPLE FOR THE MOUTH, RAISINS FOR EYES, CARROT TIP FOR HAT, AND LETTUCE FOR COLLAR.

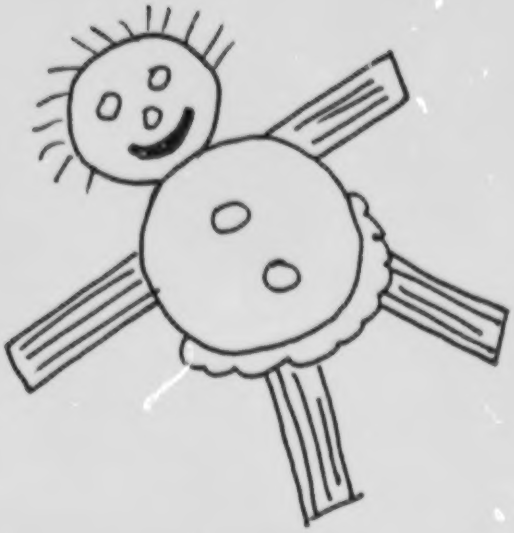
THIS SALAD HAS LOTS OF VITAMINS, MINERALS, AND PROTEIN FOR HEALTHY, GROWING BOYS AND GIRLS. CAN WE MAKE IT AT HOME TOGETHER?

LOVE,

____

DEAR________________________,

TODAY AT SCHOOL WE MADE THIS RECIPE. CAN WE MAKE IT TOGETHER AT HOME?



RAGGEDY ANN SALAD

BODY: PEACH HALF
HEAD: HALF HARD-BOILED EGG
ARMS-LEGS: CELERY STICKS
FACE, SHOES, BUTTONS: RAISINS
MOUTH: SLICE OF CELERY
SKIRT: LETTUCE
HAIR: SHREDDED CHEDDAR CHEESE

LOVE,

____

Concept D, C

Second Grade
Subject Area: Science
Social Studies

NAME THAT GRAIN

Time Preparation: 1 hour
Classroom : 3 Class Sessions

Allow 1½ hours for bread preparation if taken home.
Allow 2½ hours if baked at school.

Behavioral Objective: To identify grains and cereals in both the raw and processed form. To experience the grinding of wheat into flour and the making of flour into bread.

Process Objective: Understanding the sources of information, categorizing.

Teacher Information: As an introduction to the sequence involved in processing a basic product into a form we eat, bread and grains will serve well. The highlights of this activity include the grinding of wheat, the filmstrip, and the actual breading baking.

Materials:
- Picture of grain of wheat
- Samples of grains and cereals, egg carton
- Two flat, smooth rocks
- Yeast, flour, sugar, salt, recipe
- Kitchen utensils

(Optional) Filmstrips: Choose 1 from IMC

"The Bakery" SFS 301 cassette
"How Things are Made: The Old world and the New-Bread Baking". SFS 664

P.S. Parent-volunteers may be helpful as it gives each child something to do and is more likely to actively involve the student.

Vocabulary: grain, oat, rye, wheat, corn, barley, yeast, bakery, berries, flour, cracked, grind, kernel

ACTIVITY

Motivation:

Day 1: Introduce children to grains in their unbaked state.

1. Prepare samples of grain and cereals; separate samples using egg carton.

   Oat grains - rolled oats or steel-cut oats
   Rye grains - rye flour or rye flakes
   Wheat grains - whole wheat flour, bulger, wheat germ, white flour, brown rice, white rice
   Corn - cornmeal, grits, hominy
   Barley - buckwheat
   (May be purchased at health food stores or Food Co-op)

2. Have students taste raw grains. Have students compare grains.
3. Show how wheat grains were milled years ago by grinding them between two flat, smooth rocks. Let students experiment.
4. Show a film or filmstrip on bread making - (if available)

Development:

Day 2: Prepare bread dough with students.

1. Divide into groups, if possible. Parent-volunteers are appreciated.
2. Ask students the function of yeast, or explain. Let students smell yeast.
3. Explain that yeast cells are alive and need food to make them grow. Therefore warm water, sugar, and salt are added.
4. Mix dough and let the children have their turn kneading - (3 kneads per person)
5. Ask where is the warmest place in the room and explain that that is where to place the bread dough for the yeast to grow (and the dough to rise).
6. If oven is available, bake bread; otherwise have children take home a piece to bake.

Evaluation:

Day 3: Have students write a story about the part of the process of bread making which they enjoyed most, tell why they enjoyed it and why it was an important part in making the bread.

Additional Activity:

Tour a bakery. See Field trip list.

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ENRICHMENT

Concept B

Second Grade
Subject Area: Science
Health

FOOD AND YOUR SENSES

Time Preparation: 10 minutes - (copy student worksheet, put food on plate)

Classroom Time : 45 minutes approximately
(Can be left up for free time activity over several days/week.)

Behavioral Objective: The student will recognize the role of the major sense organs in food enjoyment.

Process Objective: Willingness to examine self; willingness to test hunches; knowledge of the making of observations, inferences, and value judgements.

Teacher Information: The five senses of taste, smell, touch, sight, and hearing are used to identify foods and strongly influence a child's food choices. These activities are designed to enhance the student's awareness of the five senses through individual investigation of each sense using foods from the four food groups. The additional activity relates the senses to four food groups.

Materials: Student worksheet dittoes entitled "Use Your 5 Senses".
Food samples from each of the four food groups: enough for each child to taste.

Activity Center Layout: copy the attached information on tagboard.

Vocabulary: senses, seeing, sight, taste, touch, hearing, sound, smell, tongue, skin, nose, ears

ACTIVITY

Motivation:

Ask students to describe how they can tell if something is a food. Write responses on the board. (see it, taste it, feel it, smell it, hear it).

Ask "what are you using when you do these things?"

(ears, eyes, nose, mouth, tongue, fingers)

What do we call these ways we find out about things? (the senses)

Explain that the class will learn more about the senses and how we use them by tasting, smelling, feeling, hearing, and looking at foods.

Development:

1. Display "Use Your Five Sesnse" on a table. Place a food from one of the four food groups on the table.
2. Have students taste a food from one or more food groups and complete the activity sheet by referring to the activity center layout. (see attached description).

   Suggested Sequence:
   Station 1 - milk group
   Station 2 - meat group
   Station 3 - vegetable/fruit group
   Station 4 - bread/cereal group
3. As students touch, taste, feel, smell, and listen to foods discuss words used to describe them.
4. When all students have tasted a food from one or more of the Four Food Groups, review the names of the senses by asking students "Who can name the five senses?" "What are some words we use to describe how foods taste, feel, etc."
5. Ask students to write 2 paragraphs; one about a food they like, and one about a food they don't like. They should use words that describe how it tastes, looks, feels, sounds, and smells.

Evaluation:

Have the students complete the worksheet "Use Your 5 Senses".

Additional Resources From Project SNAC:

Filmstrip:	"You and Your Sense of Smell and Taste" Walt Disney Media
Books:	Your Five Senses - Aliki
	Follow Your Nose - Paul Showers
	Health and Growth: Level 2 - Chapter 1 - Scott-Foresman
Worksheet:	"Do you Know About Your Senses"

USE YOUR FIVE SENSES

Activity Center Layout

YOU SEE — YOU SMELL — YOU TOUCH — YOU TASTE — YOU HEAR

Taste the food. Then write down words to describe how the food... Looks

Smells

Feels

Tastes

Sounds

Pocket for
tasting reaction
sheets

Today's Food is ________

It is from the
________ Group.

Sample Food

Choose from these words and add your own.

Sight Words

- long
- short
- round
- square
- skinny
- fat

Taste Words

- sour
- sweet
- salty
- bitter
- tasteless
- yummy
- yucky
- spicy
- sugary
- delicious
- bland
- peppery
- tangy

Smell Words

- moldy
- odorless
- rotten
- spicy
- sweat
- rancid

Sound Words

- fizz
- loud
- pop
- squeak
- slurp
- crunch
- crackle
- quiet

Touch Words

- smooth
- bumpy
- cold
- cool
- crisp
- dry
- wet
- greasy
- hairy
- juicy
- powdery
- soft
- hard
- slimy
- slippery
- sticky
- rough

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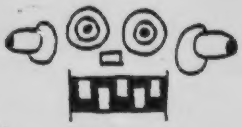
NAME ______________________________



USE YOUR 5 SENSES

PUT DOWN THE WORDS THAT BEST DESCRIBE HOW IT

LOOKS	FEELS
____________________	____________________
____________________	____________________
____________________	____________________

SMELLS	TASTES
____________________	____________________
____________________	____________________
____________________	____________________

SOUNDS WHEN YOU CHEW IT

____________________	____________________
____________________	____________________
____________________	____________________

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NAME ____________________________

DO YOU KNOW ABOUT YOUR SENSES

FILL IN AN ANSWER:

1. YOU TASTE WITH YOUR T__ __ __ __ __.

2. YOU SMELL WITH YOUR N __ __ __.

3. YOU HEAR WITH YOUR E __ __ __.

4. YOU FEEL THINGS WITH YOUR SK __ __.

5. WITH YOUR SENSE OF TOUCH YOU CAN FIND OUT IF FOODS ARE
HA __ __ OR SO __ __,
R __ __ GH OR SM __ __ __ __.

6. THE FIVE MAIN SENSES ARE THOSE OF
SE __ __ __ __
H __ __ __ __ __ __ __
TA __ __ __ AND
TOU __ __
SM __ __ __ __ __ __ __

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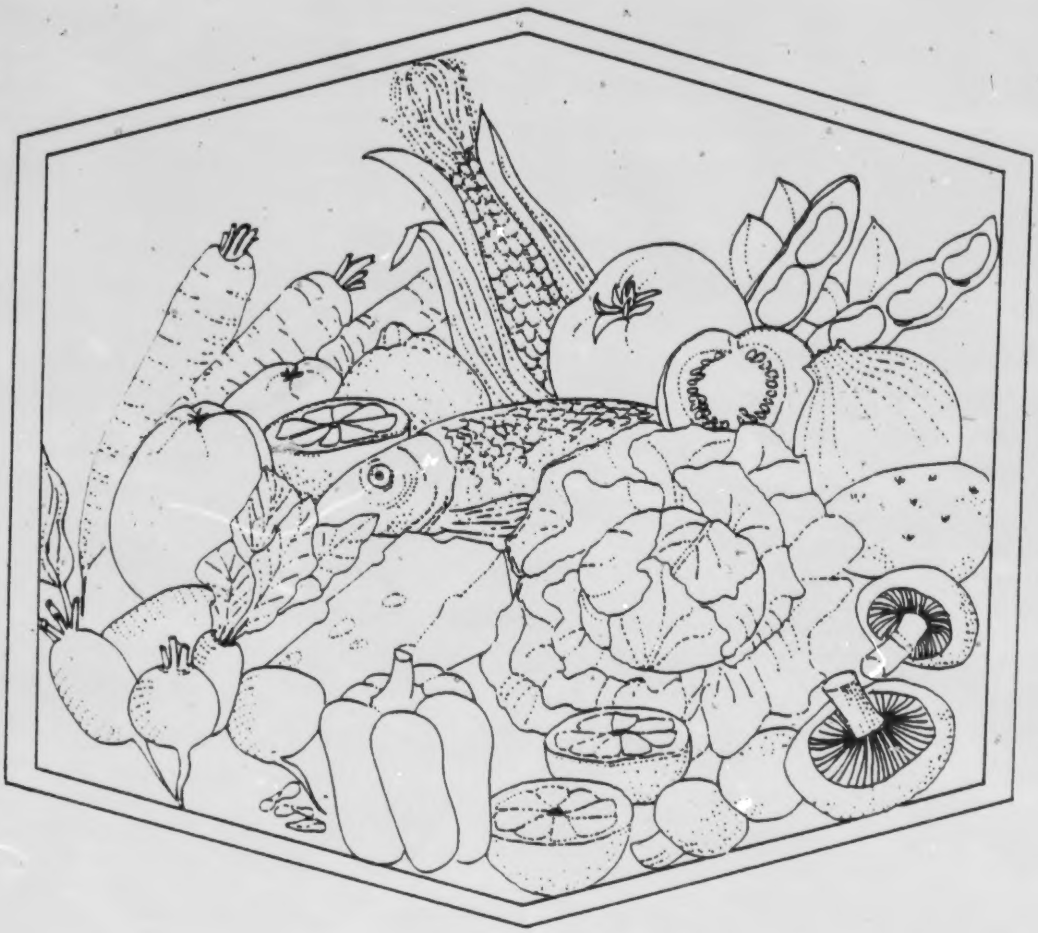
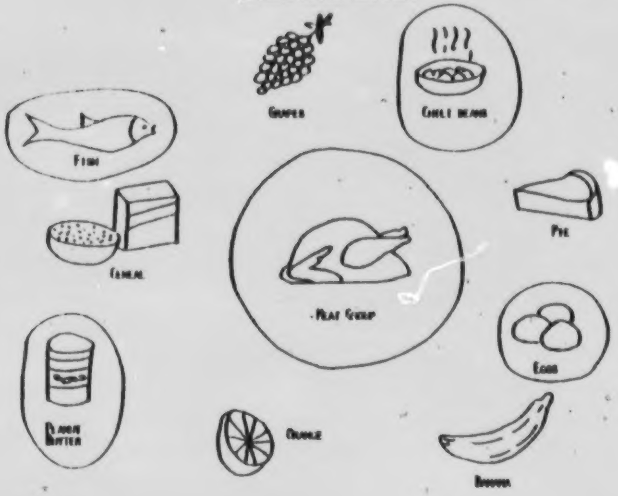
WORKSHEET ANSWER KEYS

Answer keys for the worksheets in the previous lessons have been reduced in size and arranged four to a page in sequential order. Each answer has the same title and page number as the original worksheet used in the lesson.



Name Answer Key

Circle the Meat Group Foods


Grapes
Chili Beans
Fish
Pie
Cereal
Meat Group
Eggs
Peanut Butter
Orange
Banana

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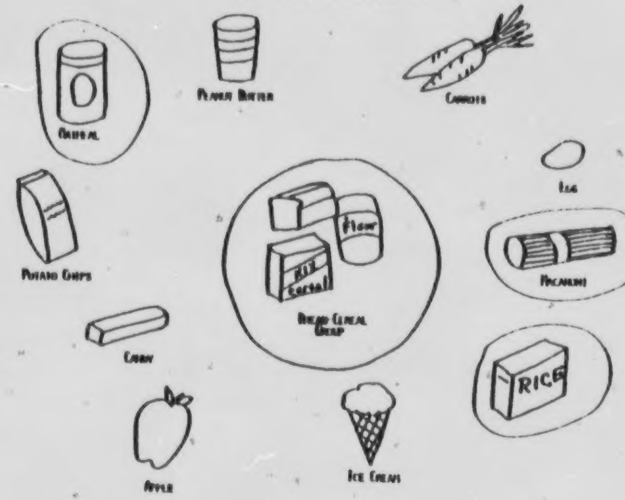
Name Answer Key

Circle the Bread Cereal Group Foods


Oatmeal
Peanut Butter
Carrots
Egg
Potato Chips
Flour
Rice Cereal
Macaroni
Bread Cereal Group
Candy
RICE
Apple
Ice Cream

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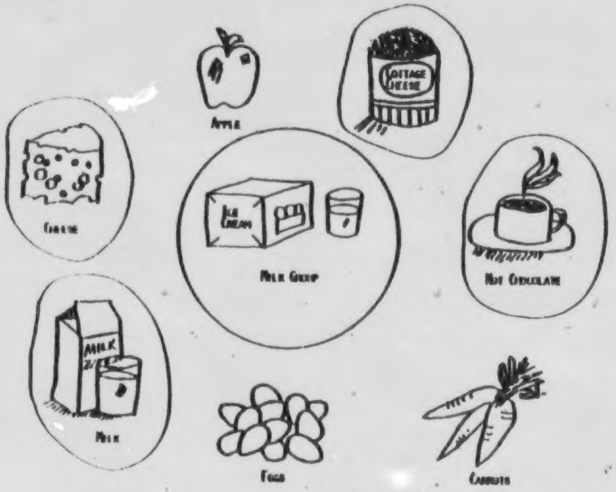
Name Answer Key

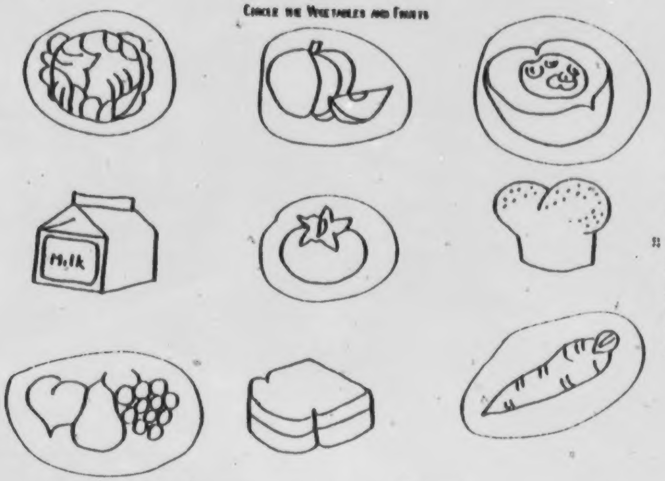
Circle the Milk Group Foods


Apple
Cottage Cheese
Cheese
Ice Cream
Milk Group
Hot Chocolate
MILK 2%
Milk
Eggs
Carrots

San Mateo City Schools, CA Dept. of Ed. 16

Name Answer Key

Circle the Vegetables and Fruits



Color the Vegetables and Fruits

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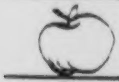
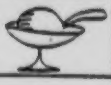
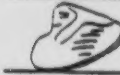
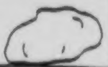
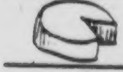
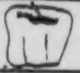
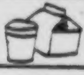
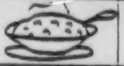
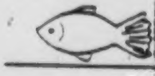
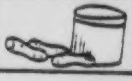
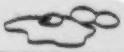
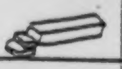
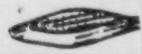
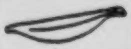
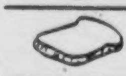
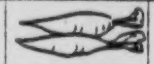
NAME ANSWER KEY

BASIC FOOD GROUPS

NAME THE CORRECT GROUP FOR EACH FOOD IN THE BOXES TO THE RIGHT.

	VEGETABLE FRUIT		MILK
	MEAT		VEGETABLE FRUIT
	MILK		VEGETABLE FRUIT
	MILK		BREAD-CEREAL
	MEAT		MEAT
	MEAT		MILK
	VEGETABLE FRUIT		VEGETABLE FRUIT
	BREAD		VEGETABLE FRUIT

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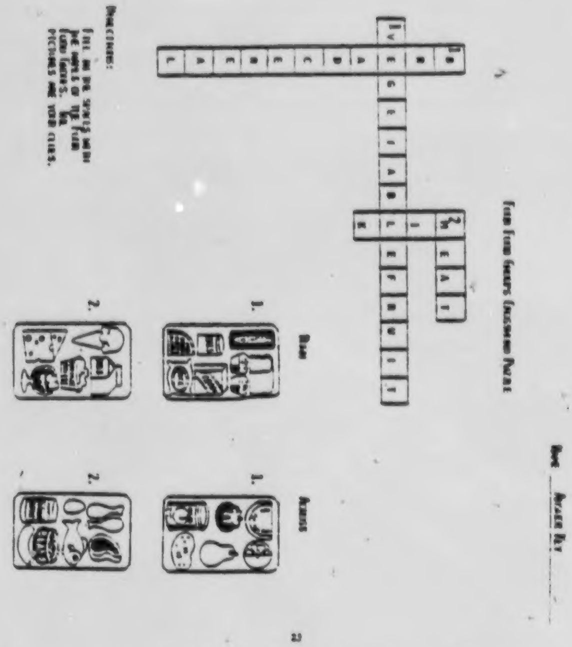

FOUR FOOD GROUPS CROSSWORD PUZZLE

NAME ANSWER KEY

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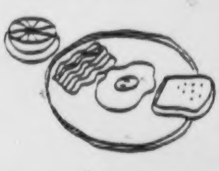
NAME ANSWER KEY

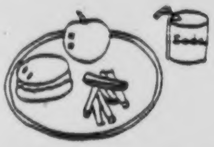
WHAT'S MISSING HERE?

HERE ARE PICTURES OF THREE MEALS. WHICH FOOD GROUP IS MISSING? ON THE LINE BELOW EACH MEAL, WRITE THE NAME OF THE MISSING FOOD GROUP. THEN PLAN YOUR OWN BALANCED MEAL.



MILK

BREAKFAST

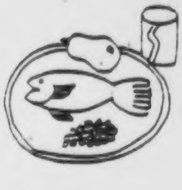


MILK

LUNCH

WRITE OR DRAW A MEAL WITH ALL FOUR FOOD GROUPS.

BROILED FISH
MASHED POTATOES
ROLL
TOSSED SALAD
APPLE
MILK



BREAD-CEREAL

DINNER

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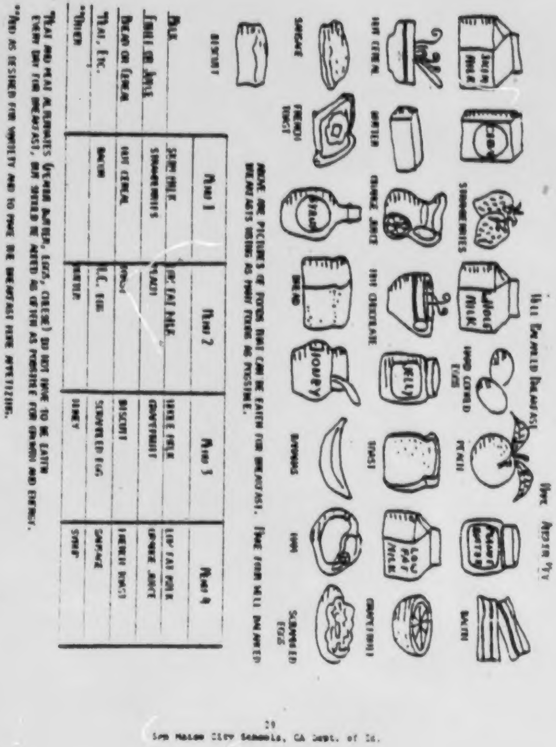

NAME ANSWER KEY

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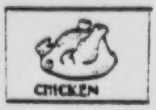
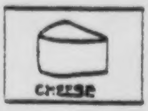
NAME ANSWER KEY

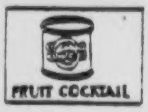
A BALANCED MEAL HAS ALL 4 FOOD GROUPS

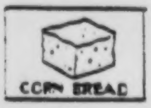
WRITE A BALANCED MEAL.
CHOOSE FROM THE FOODS BELOW.

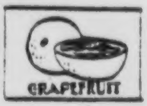
CHICKEN, CHEESE, OR PEANUT BUTTER
CORNBREAD
BROCCOLI
GRAPEFRUIT OR FRUIT COCKTAIL
MILK

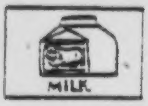


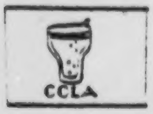


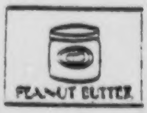

FRUIT COCKTAIL

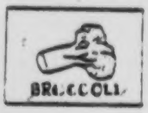



GRAPEFRUIT






PEANUT BUTTER



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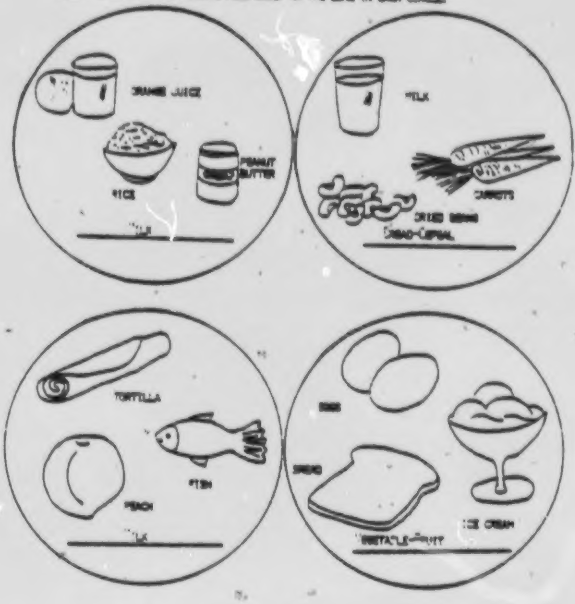
NAME ANSWER KEY

WHICH FOOD GROUP IS MISSING

PLACE THE NAME OF THE MISSING FOOD GROUP ON THE LINE IN EACH CIRCLE.


ORANGE JUICE
RICE
PEANUT BUTTER
MILK
MILK
CARROTS
DRIED BEANS
BREAD-CEREAL
TORTILLA
FISH
PEACH
MILK
EGGS
BREAD
ICE CREAM
VEGETABLE-FRUIT

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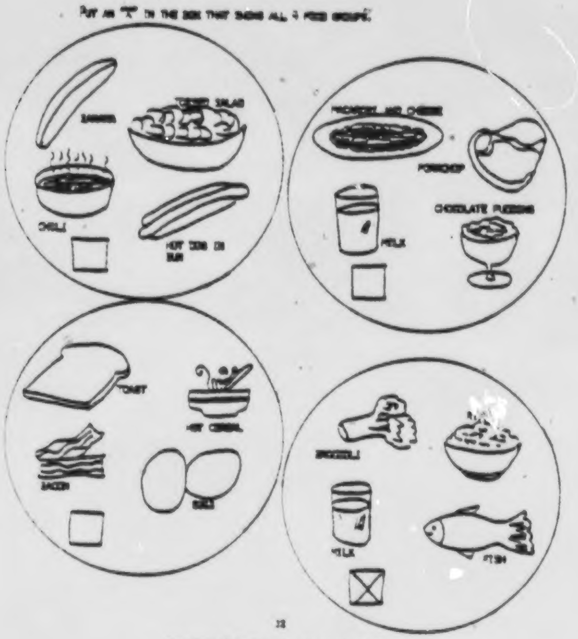
NAME ANSWER KEY

"X" MARKS THE SPOT

PUT AN "X" IN THE BOX THAT SHOWS ALL 4 FOOD GROUPS.


BANANA
TOSSED SALAD
CHILI
HOT DOG ON BUN
MACARONI AND CHEESE
PORKCHOP
MILK
CHOCOLATE PUDDING
TOAST
HOT CEREAL
BACON
EGGS
BROCCOLI
RICE
MILK
FISH

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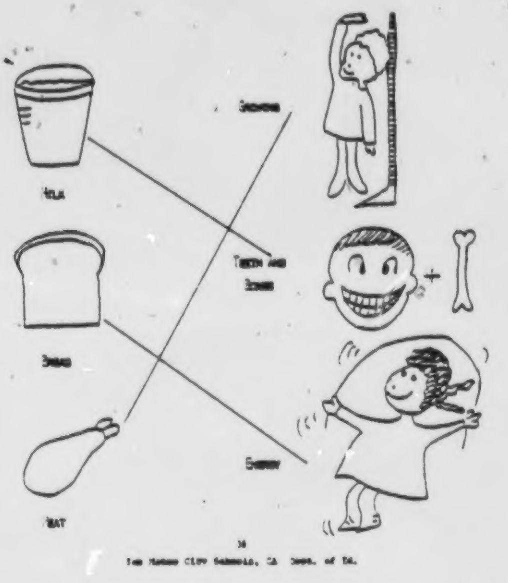
PRETEST - LEVEL 2 - LESSON 7 NAME ANSWER KEY

HOW FOOD HELPS YOUR BODY

DIRECTIONS: DRAW A LINE FROM THE FOOD TO THE PICTURE THAT SHOWS HOW IT HELPS YOUR BODY.


MILK
BREAD
MEAT
GROWING
TEETH AND BONES
ENERGY

San Mateo City Schools, CA Dept. of Ed.

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Name Answer Key

What's For Lunch ?

12
1
2
3
4
5
6
7
8
9
10
11

Directions: Write everything you had to eat and drink for lunch today.

Answers will vary depending on what student had to eat.

Circle the right answer.

1. Did you have a food or drink from the milk group? Yes No
2. Did you have a food from the meat group? Yes No
3. Did you have a food from the vegetable-fruit group? Yes No
4. Did you have a food from the bread-cereal group? Yes No
5. Did you eat a balanced meal with all of the four food groups? Yes No

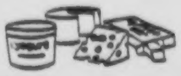
---

Name Answer Key

Type A Lunch

1. Circle the Type A Lunch.

Hamburger on a bun	Jelly sandwich
Carrot & celery sticks	Potato chips
Apple	Cake
Milk	Soft drink



2. If you had a choice, which lunch would you choose for the best nutrition (health)? Circle 1.

Lunch 1	Lunch 2
Hamburger on a bun	Jelly sandwich
Carrot & celery sticks	Potato chips
Apple	Cake
Milk	Soft drink

3. List the 4 food groups in the Type A Lunch.
   1. Meat Group
   2. Milk Group
   3. Vegetable-Fruit Group
   4. Bread-Cereal Group

Name Answer Key

Lunch Menu Contest

Rules: Write a "Type A" lunch menu that has all these parts:

1. Main Dish (meat-protein)
2. Vegetable (raw or cooked)
3. Bread or roll
4. Fruit
5. Carton of milk

If your main dish is a sandwich, burger or pizza, the bread is part of the main dish.

My Menu

Ham Sandwich (contains main dish and bread)

Fresh vegetable sticks (contains vegetable-fruit)

Banana (contains fruit)

Milk

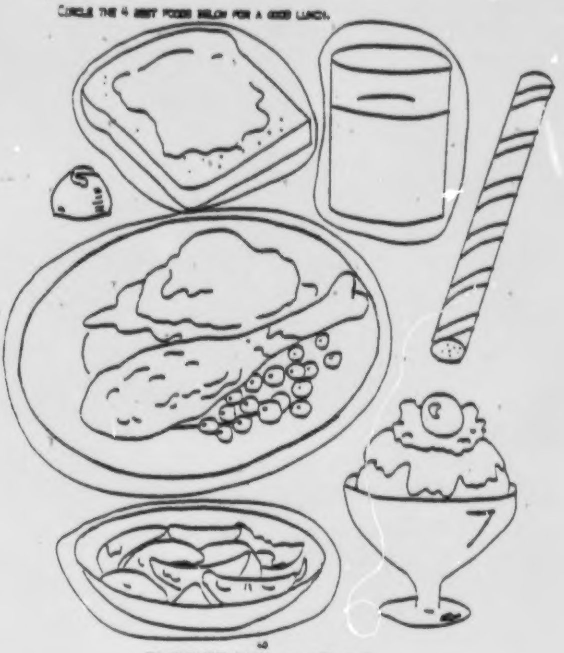
*Answers will vary

Does your menu have the five parts? Yes

Name Answer Key

Best Foods For a Good Lunch

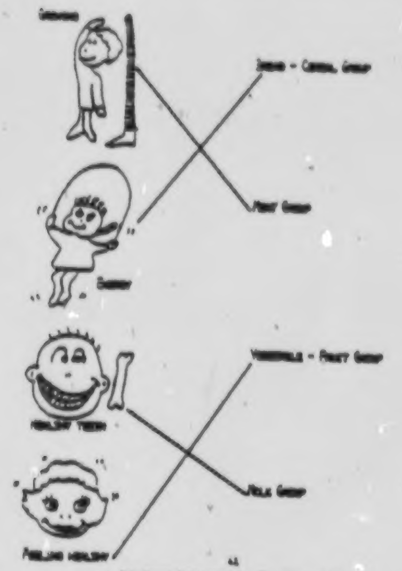
Circle the 4 best foods below for a good lunch.



Name Answer Key

Four Food Groups

Directions: Match the food group to the job it does in your body.


Growing
Bread - Cereal Group
Meat Group
Energy
Vegetable - Fruit Group
Healthy Teeth
Milk Group
Feeling Healthy

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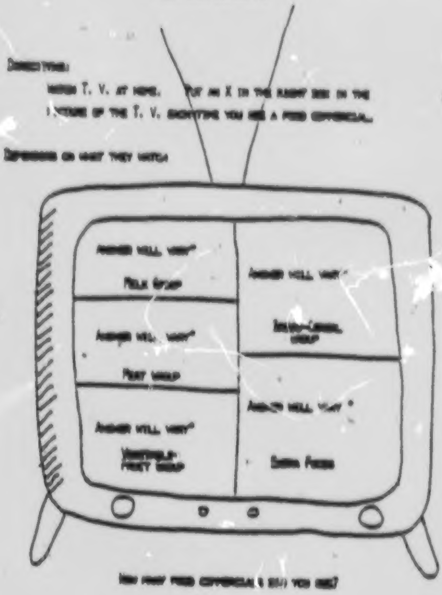
Name Answer Key

Television Detective

Directions:
Watch T. V. at home. Put an X in the right box in the picture of the T. V. everytime you see a food commercial.

* Depending on what they watch


Answer will vary*
Milk Group
Answer will vary*
Bread-Cereal Group
Answer will vary*
Meat Group
Answer will vary*
Vegetable-Fruit Group
Answer will vary*
Snack Foods

How many food commercials did you see?

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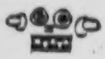
Name Answer Key

Use Your 5 Senses



Put down the words that best describe how it

Looks
Answers will vary*

Feels

Smells
Answers will vary*

Tastes

Sounds when you chew it
Answers will vary*

*Depending on food selected to taste.

[illegible]
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Health and Growth Level 2
Chapter 4

Name Answer Key

Do You Know About Your Senses

Fill in an answer.

1. You taste with your t O N G U E
2. You smell with your n O S E
3. You hear with your e A R S
4. You feel things with your sk I N
5. With your sense of touch you can find out if foods are
ha R D or so F T,
r O U gh or sm O O T H
6. The five main senses are those of
se E I N G
h E A R I N G
ta S T E and
tou C H
sm E L L I N G

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SNAC

San Mateo
Nutrition Activity Curriculum

"Swing Into Nutrition"

SAN MATEO CITY SCHOOL DISTRICT

50 Peninsula Avenue
P.O. Box K
San Mateo, California 94402

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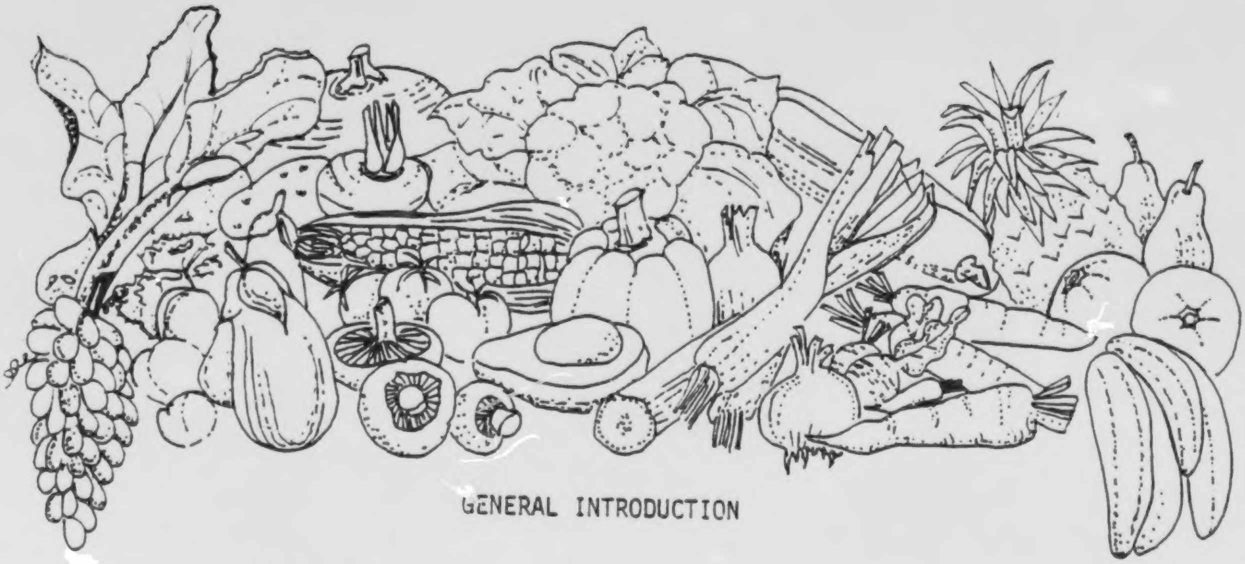
Project Director

Funded 1976-80 By California State Department of Education
1975 Child Nutrition Facilities Act

January 1980
San Mateo City School District

PS 011893



GENERAL INTRODUCTION

Nutrition Education starts with you! The San Mateo City School District has designed a program in the elementary grades to integrate nutrition education into the general curriculum.

The goal of this program is to prepare elementary grade students to develop and improve healthful food habits. By the time the student leaves the elementary school, he/she should understand the relationship between food habits and well-being; should express concern that his/her food choices promote well-being; should demonstrate a willingness to taste new foods; and should be prepared to make informed decisions regarding his/her food choices. To achieve these purposes, the program focuses on the theme:

"SWING INTO NUTRITION!"

The program needs and encourages active support and involvement of students, parents, and staff members of a multicultural population. The program is based on five concepts:

(A) Food Choices and Health

(B) Factors influencing Food Choices

(C) Food Related Careers

(D) Consumer Competencies

(E) Food Safety and Sanitation

It is a multi-disciplinary curriculum in which cognitive and effective objectives in all subject areas including language arts, science, health, social studies, and math are integrated with nutrition concepts and synthesized with appropriate process goals (teaching and instructional methods). These process goals have three sources: the person, society, and the disciplines.

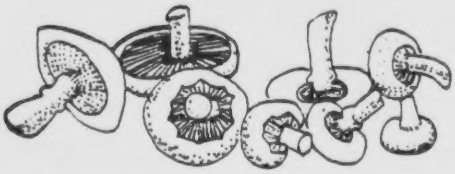
Each lesson contains directions which include behavioral and process objectives, a concept focus which is indicated by a letter in the upper left-hand corner, teacher information, materials needed or suggested, specific directions for motivation and activities, evaluation or pupil performance, and additional resources and activities. Cooking and food preparation activities are occasionally suggested. To supplement these activities, a wide collection of cookbooks and recipes are available in the Project Resource Library.

The lessons are numbered in sequence, but the teacher may rearrange the lessons to suit classroom needs and schedule. In addition to these lessons, there are ENRICHMENT lessons at the end of each Curriculum Guide to reinforce previous lessons.

All of the lessons and activities mentioned in this Curriculum Guide have been designed, tested, evaluated and articulated by Project teachers and nutritionists. They have proven effective for all participants.

Remember: The nutrition activities involving children are not only educational but fun. So join us and ......

"SWING INTO NUTRITION!"



ACKNOWLEDGEMENTS

Many, many people have helped and contributed valuable time in the development, teaching, and evaluation of the San Mateo Nutrition Education Project. The Nutrition Education Staff in San Mateo City School District wishes to acknowledge and thank these persons for their special achievements.

Food Service Director	Carvill Veech (Project Director 1976-79)
Nutrition Education Aide	Lenore Hicks
The Board of Education	Donald Hill Sue Lempert Albert Di Matteo Robert Braun Jeanne Schlueter
All Project K-5 Teachers	Laurel School North Shoreview School
Project Principals	Warren Kofler Charles Moorer
Graphic Artists	Brooke Travers William Kirk David Moore

AND

School Food Service staff members, parents, school nurses, the Project Evaluator Howard Wolff, Ph.D., Special Curriculum Consultant Anna Nuernberger, and Nutrition Education secretarial staff, especially Althea Jocz and Barbara Harris.

SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

(SNAC)

"SWING INTO NUTRITION!"

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SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

CURRICULUM GUIDE

Third Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
1	Digestion: You Are What You Eat	To identify the sequential pathway of food through the digestive tract.	A	Health	1
	"Digestive System" *Worksheet (fill-in)*	To illustrate the correct digestion sequence.	A	Health	4
	"Who Am I?" *Riddles (fill-in)*	To describe digestion through riddles.	A	Health	5
2	Choosing For Health - Review of the Four Food Groups	To recall the Four Food Groups and classify foods into these groups.	A	Health	6
	"What's My Menu" *Worksheet (fill-in)*	To state the foods eaten for one day.	A	Health	9
	"Planning A 3-2-4-4 Day" *Worksheet (fill-in)*	To plan a day's menu using the correct number of servings from each food group.	A	Health	10
	"How Many Servings" *Worksheet (circling)*	To identify the correct number of servings from each food group.	A	Health	11
	"X Marks the Spot" *Worksheet*	To identify the menu with all four food groups.	A	Health	12
3	Your Health Is To Keep: Food Related Health Problems	To identify over/underweight and tooth decay as food related health problems.	A	Health	13
	"What's Best For Me?" *Worksheet (circling and fill-in)*	To specify foods which can lead to health problems.	A	Health	15
	"Food: What's In It For You?" *Bulletin Board (Information sheet)*	To supply information for bulletin board display	A	Health Art	16

CURRICULUM GUIDE

Third Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
4	Protein: The Body Builder	To identify function and food sources of protein.	A	Health	17
	"Protein for Making Us Grow" *Worksheet (circling)*	To identify protein-rich foods.	A	Health	19
	"Protein Fun Sheet" *Worksheet (circling)*	To select correct facts about protein.	A	Health	20
	"High Protein Recipes" *Recipe*	To practice preparation of protein-rich foods.	A	Health	21
5	Milky Way To Healthy Bones	To identify function and food sources of calcium.	A	Health	22
	"Tasting Party - High in Calcium" *Recipes*	To practice preparation of calcium rich foods.	A	Health	24
	"Do You Know About Calcium?" *Worksheet (fill-in)*	To select correct facts about calcium.	A	Health	25
	"Meet Charles T. Calcium" *Information sheet*	To reinforce knowledge about calcium.	A	Health	26
	"Milk Foods Puzzle" *(cross word puzzle)*	To choose appropriate words concerning milk.	A	Health Art	27
6	The ABC's of Eating	To identify function and food sources of major vitamins.	A	Health	28
	"More Information on Vitamins" *Information sheets*	To reinforce knowledge of vitamins.	A	Health	30 31
	"Vitamin A Food Experiences" *Recipes*	To practice preparation of vitamin A rich foods.	A	Health	32
	"Vitamin C Food Experiences" *Recipes*	To practice preparation of foods high in vitamin C.	A	Health	33

CURRICULUM GUIDE

Third Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
	"Vitamins" *Worksheet* *(circling and matching)*	To identify function and food sources of major vitamins.	A	Health	34
	"I Am A Vegetable" *(puzzle and drawing)*	To illustrate a vegetable high in vitamin A.	A	Health Art	35
	"Cut Me In Half" *(puzzle)*	To illustrate a fruit high in vitamin C.	A	Health Art	36
	"Vitamins Added to Milk" *Worksheet (fill-in)*	To identify two vitamins added to milk.	A	Health	37
7	Food Spoilers	To identify proper sanitation procedures to be used when handling or storing food.	E	Science	38
	"Meet The Food Spoilers" *Information sheet*	To identify the living organisms that can spoil food.	E	Science	41
	"Snacks In A Sack" *Information sheet*	To describe the safest foods to pack in a school lunch.	A	Health	42
	"Where Should These Foods Be Stored?" *Worksheet (fill-in)*	To match foods with correct storage location.	E	Health	43
	"Meet The Food Spoilers" *Worksheet* *(true - false)*	To select the correct facts about food spoilers.	E	Science	44
8	Food Related Careers	To match job titles with food processing jobs.	C	Social Studies	45
	"Who Am I?" *Game (acting)*	To illustrate food related careers through role playing.	C	Social Studies	47
	"Food Helpers: How Many Do You Know?" *Game*	To make a list of food helpers.	C	Social Studies	48

CURRICULUM GUIDE

Third Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
	"Food Career Crossword Puzzle" *Puzzle*	To choose appropriate words concerning food related careers.	C	Social Studies Art	49
	"Food Careers Matching Sheet" *Worksheet (matching)*	To match people with the job they do.	C	Social Studies	50
	"Food Helpers" Part 1 *Worksheet (fill-in)*	To list all people required to get cereal to the consumer.	C	Social Studies	51
	"Food Helpers" Part 2 *Worksheet (fill-in)*	To identify food helpers and their jobs.	C	Social Studies	52
9	Labels, Labels, Labels!	To identify the information supplied by a food label.	D	Reading Math Health	53
	"Read The Label" *Worksheet (fill-in)*	To identify the information supplied by reading a label.	D	Reading Math Health	55
10	North, South, East, West - Which Bread Do You Like Best?	To recognize the influence of regional background in food preferences.	B	Social Studies	56
	"Map Of The U.S." *Worksheet (fill-in)*	To match bread type with region where it is most often eaten.	B	Social Studies Art	58
	"Indian Fry Bread" *Recipe*	To practice preparation of a regional bread.	B	Social Studies Health	59
11	Foods Around The World	To expose students to food preferences of various cultures in the world.	B	Social Studies	60
	"Eating Around The World" *Worksheet (fill-in)*	To select foods from different countries around the world.	B	Social Studies	65
12	Preserving Foods: Why And How	To identify methods of food preservation.	E	Health Science	66
	ENRICHMENT				

CURRICULUM GUIDE

Third Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
	"A Homemade Food Drier" *Information Sheet*	To illustrate the construction of a food drier.	E	Science	69
	"Additional Information For Teachers"	To reinforce knowledge of food preservation methods.	E	Science Health	70
13	Insect Friends And Enemies ENRICHMENT	To identify insects that are helpful or harmful to food crops.	E	Science	71
	"Insect Friends And Insect Enemies" *Booklet*	To illustrate helpful and harmful insects.	E	Science Art	73
	"Insects, Friends or Enemies?" *Worksheet (fill-in)*	To identify the different insects.	E	Science	83
14	A Close Look At Food Ads ENRICHMENT	To identify food advertisement techniques used on TV and in magazines.	B,D	Social Studies	84
	"Mission Possible #1" *Worksheet (fill-in)*	To observe food commercials on television.	B,D	Social Studies	86
	"Mission Possible #2" *Worksheet (fill-in)*	To observe food advertisements in magazines.	B,D	Social Studies	87

Concept A

Third Grade

Subject Area: Health

DIGESTION: YOU ARE WHAT YOU EAT

Behavioral Objective: The student will identify the sequential pathway of food through the four major digestive organs.

Process Objective: Sequencing information, cause and effect relationships.

Teacher Information: The student will have a clearer understanding of the relationship between what is eaten and physical health only when he/she understands that the food eaten does in fact "become you". This lesson follows the digestive pathway at an easily understood level.

The topic is introduced in the Health and Growth Text: Level 3 (Scott Foresman) and is covered in more detail in the Fifth Grade Lung Unit.

Materials:
Diagram of Digestion (large poster size) (Project SNAC)
"Digestive System" student worksheet
"Who Am I" - (Digestive System Riddles) student worksheet
Recommended but not essential: Film or filmstrip on digestion (see resources)

Health and Growth: Level 3, Chapter 1 (Scott Foresman)

Vocabulary: digestion, mouth, saliva, food tube, stomach, small intestine large intestine

ACTIVITY

Motivation:

Class discussion: What do you think you are made up of? (muscle, bones, hair, skin, etc.)

What are your muscles, bones, etc. made from? (the food I eat).

How do you think your food turns into muscles, bones, etc.? (through a body process called digestion).

Development:

Display the digestive system poster and orally trace a food through the body. As each part is discussed, write the name of the organ and the number on it:

1. Mouth
2. Food tube (esophagus)
3. Stomach
4. Small intestine
5. Large intestine

Points to bring out in discussion:

A) Food has to be dissolved before it can get into your blood to be carried to all parts of your body.

B) Food like steak and apples has to be dissolved by special juices so that it can be used by the body. Water cannot dissolve it alone. Every time you swallow food or a drink it follows a special path called the digestive system.

(Follow DIGESTION DIAGRAM POSTER from here)

1) Mouth - Food starts to digest when you are chewing it and mixing it with a juice called saliva.

2) Food tube - When you swallow food it goes down a food tube (called the esophagus) to your stomach.

3) Stomach - In your stomach the food gets all churned around and mixes with other juices that are in your stomach.

4) Small intestine - Then it goes into your small intestine which is a long tube curled up inside of you. (Point to lower abdomen to show general location). Your small intestine is about 20 feet long. Special juices in the small intestine help to dissolve the food, and then the food can pass right through the walls of the small intestine into the blood. The blood carries the digested food to all parts of the body.

5) Large intestine - All the food that did not dissolve goes into the next big tube called the large intestine. The left-over food stays here until the excess water is absorbed back into the body. The left-over food is passed out of the body at the end of the digestion process.

C) Have students complete the worksheet entitled "Digestive System" by filling in the names of the digestive organs.

Evaluation:

Check student work on the "Digestive System" worksheet.

Additional Activities:

1. Digestive System Riddles - Use as a class discussion or for seat work.

2. Digestive System Bulletin Board - Have one student trace another student's body outline on a large piece of butcher paper. Have students draw in the major digestive organs (mouth, esophagus, stomach) and measure 20 feet of string to coil for the small intestine. Draw the large intestine around the outside of the small intestine. Label each of the major parts.

Additional Resources:

16 mm film: "You Are What you Eat", Barr Films, Color, 10 min. An animated film that explains the basic concepts of nutrition including the digestive system and how it works.

Filmstrips:	"How Food Becomes Part of You" - (Project SNAC) Shows more complex digestion. "The Meat Group" from Nutrition - Traces digestion of meat group foods in cartoon format.
Film:	"What's Good to Eat" - San Mateo IMC. Shows relationship of food to weight.

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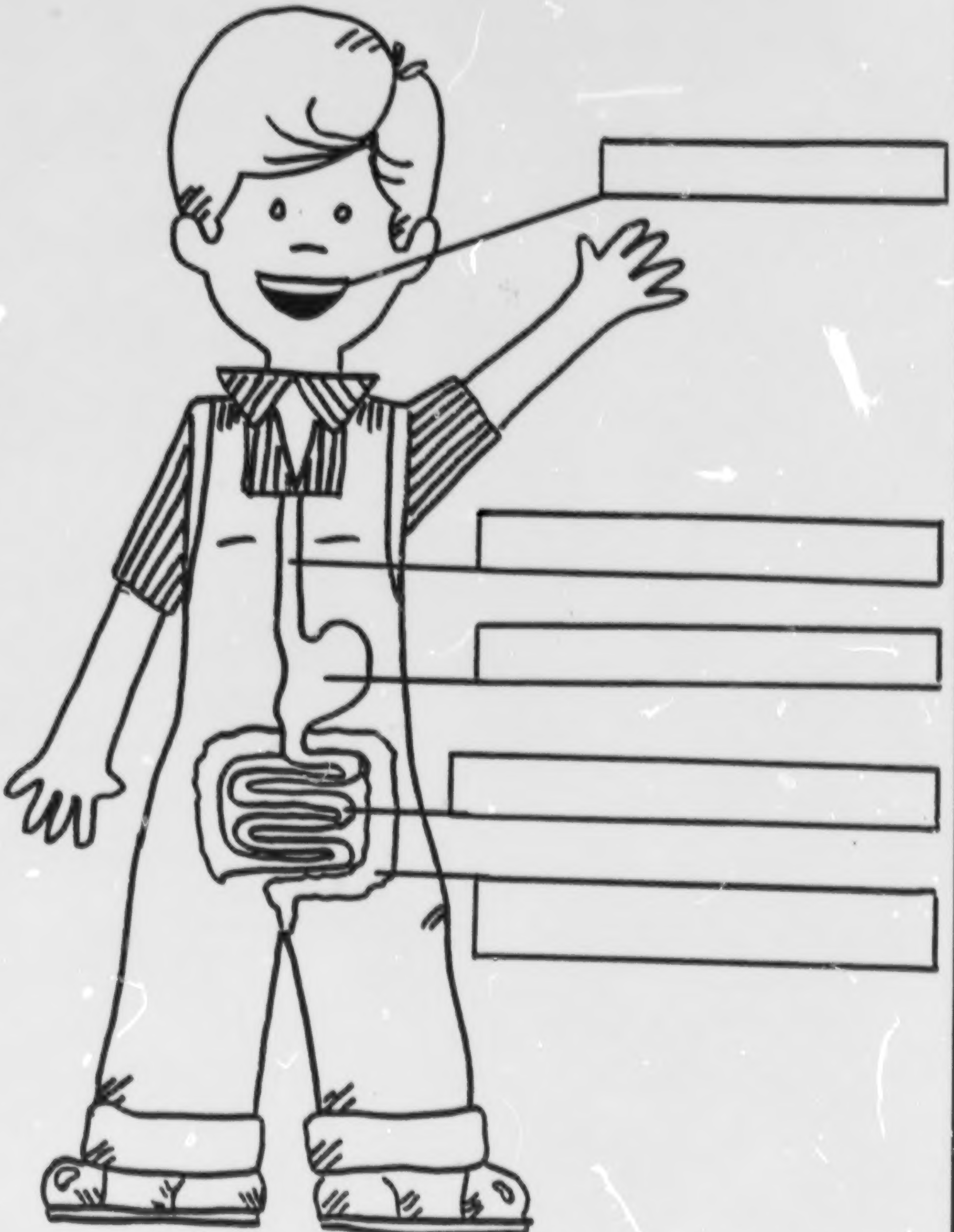
DIGESTIVE SYSTEM



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WHO AM I?

DIGESTIVE SYSTEM RIDDLES

DIRECTIONS: CHOOSE FROM THESE WORDS TO FINISH THE RIDDLES:

STOMACH	MOUTH	SMALL INTESTINE
SALIVA	LARGE INTESTINE	FOOD TUBE

I AM WHERE YOU CHEW YOUR FOOD. I AM YOUR ____________________

I AM A JUICE THAT MIXES WITH FOOD IN YOUR MOUTH. I HELP DISSOLVE FOOD.

I AM ______________________________

I AM WHAT FOOD GOES THROUGH WHEN IT LEAVES YOUR MOUTH. I AM YOUR

____________________ ____________________

I AM WHERE FOOD GOES WHEN YOU SWALLOW IT. THE FOOD MIXES WITH JUICES AS IT IS CHURNED AROUND. I AM YOUR

____

I AM A LONG TUBE. FOOD IS DIGESTED IN THIS TUBE. I AM ALMOST 20 FEET LONG. I AM YOUR

____________________ ____________________

I AM THE BIG TUBE WHERE LEFTOVER FOOD STAYS UNTIL IT IS PASSED OUT OF THE BODY. I AM YOUR

____________________ ____________________

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Concept A

Third Grade
Subject Area: Health

CHOOSING FOR HEALTH

(Review of the Four Food Groups)

Behavioral Objective: The student will recall the names of the Four Food Groups.

The student will classify foods into the Four Food Groups.

The student will list the recommended number of servings from each of the Four Food Groups.

Process Objective: Classifying, retrieving relevant knowledge.

Materials:
Picture of Four Food Groups (attached)
8½"x 11" paper, pencils, school lunch menu
Food pictures, (or food models), of a balanced day
"What's My Menu?" student worksheet
"Planning a 3-2-4-4 Day" student worksheet
"How Many Servings?" student worksheet

Vocabulary: menu, servings, recommended

ACTIVITY

Motivation:

Ask students if they have ever heard of the Four Food Groups.

Development:

Day 1:

Draw four large squares on the board. Ask the students to name the Four Food Groups. Write the correct answers on the board, one in each box. Then add one box and write "extras" at the top.

Have each student fold a piece of 8½" x 11" paper into 6 sections.

Ask each student to write the name of the Four Food Groups and extras at the top of a square. Ask them to name foods they had for breakfast. Classify each orally and write it in the appropriate square.

Then read the school menu for the day and have each student write the name of each food in the appropriate food group square.

Go over the answers and have students make corrections.

Review the foods which belong in each group either orally or by using the suggested film.

Following the review of Four Food Group classification, ask the students to keep a record of everything they eat between the activity today and the same time tomorrow on the student worksheet "What's My Menu?"

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Day 2:

Explain to the class that to get all the right kinds of foods every day they should eat the right number of servings from each group and not too many extras.

Show the class a one day diet made of food models or pictures and have them orally help you classify each food as you write the foods on the board under the correct Four Food Groups Title. Count the number of servings and conclude that the menu is a 3 - 2 - 4 - 4 day

3 servings - Milk Group
2 servings - Meat Group
4 servings - Vegetable-Fruit Group
4 servings - Bread - Cereal Group

Have each student evaluate his/her food record to see if he/she had a 3-2-4-4 day.

Ask for a show of hands by asking:

"How many of you had 3 or more servings from the Milk Group?"

"How many had 2 or more servings from the Meat Group?"

"How many had 2 or more servings from the Vegetable-Fruit Group?"

"How many had 4 or more servings from the Bread-Cereal Group?"

Ask several students who did not eat the recommended number of servings to suggest something they could eat to meet the 3-2-4-4 minimum.

After the students evaluate their menu have them complete the student worksheet "Planning a 3-2-4-4 Day".

Evaluation:

Use the student worksheet "How Many Servings?" or orally ask students the question on the worksheet.

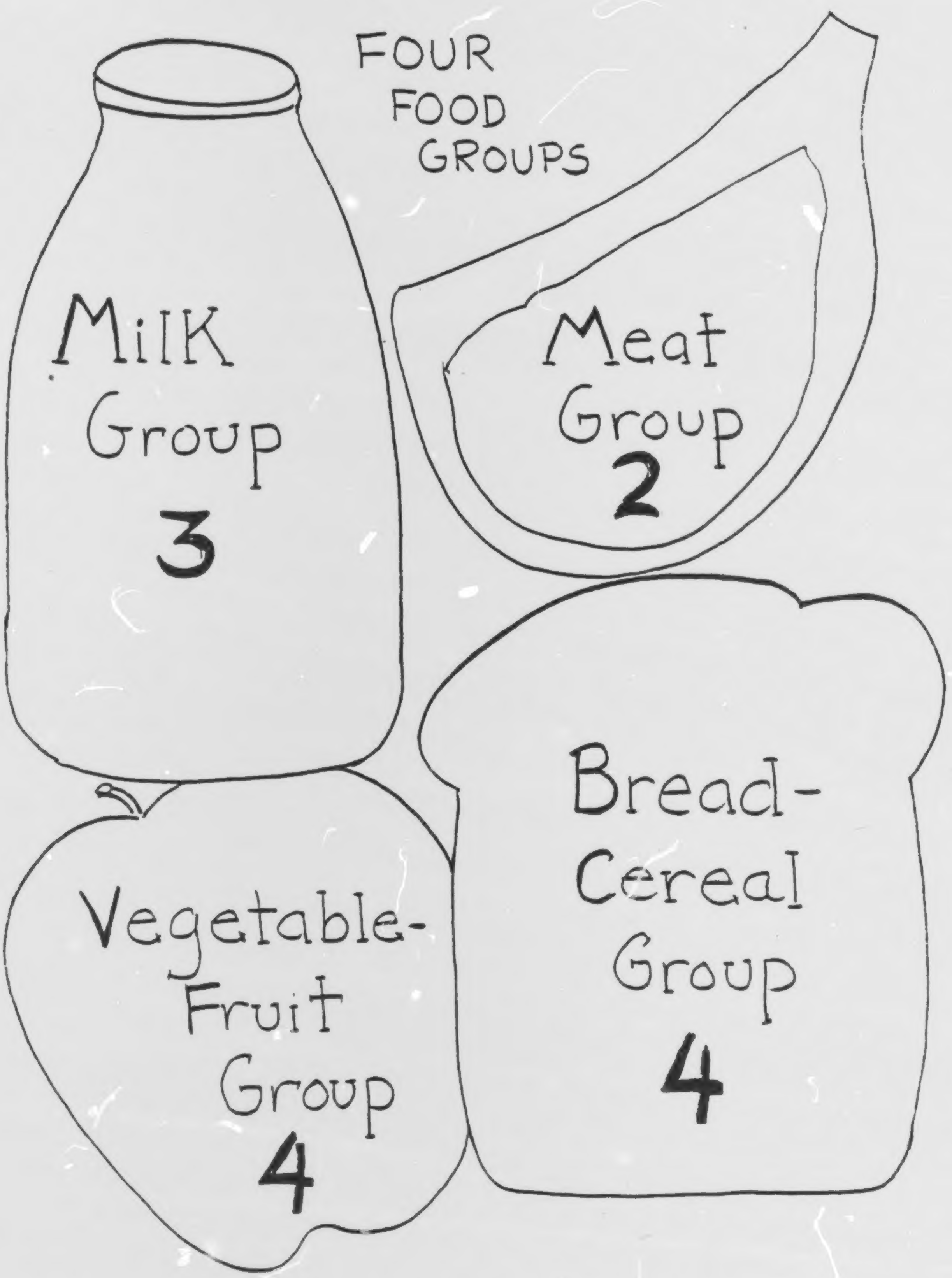
Additional Activities:

Have students complete the Four Food Group worksheet "X Marks the Spot" (attached).

Additional Resources:

Film: "Professor Whacko's Food Fable".
Chiquita Banana, 1976

Introduces the Four Food Groups and the 3-2-4-4 balanced diet concept.


FOUR FOOD GROUPS
Milk Group 3
Meat Group 2
Bread-Cereal Group 4
Vegetable-Fruit Group 4

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NAME ______________________

WHAT'S MY MENU

DIRECTIONS: WRITE DOWN EVERYTHING YOU EAT AND DRINK FOR ONE WHOLE DAY.
BE SURE TO WRITE ALL YOUR SNACKS AND DRINKS, TOO.
SAVE YOUR LIST.

THIS IS WHAT I ATE IN THE MORNING FOR BREAKFAST:

THIS IS WHAT I ATE FOR LUNCH:

THIS IS WHAT I ATE AFTER SCHOOL:

THIS IS WHAT I ATE FOR DINNER:

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NAME ______________________________

PLANNING A 3-2-4-4 DAY

FOR HEALTH, GROWTH, AND ENERGY, EVERYDAY SHOULD BE A 3-2-4-4 DAY!!

DIRECTIONS:

1. PLAN A 3-2-4-4 DAY USING FOODS YOU LIKE.
2. WHEN YOU HAVE WRITTEN A MENU, TRADE IT WITH A CLASSMATE AND TELL HOW YOUR FOODS ADD UP TO 3-2-4-4.

BREAKFAST ______________________________

____

____

____

____

LUNCH ______________________________

____

____

____

____

DINNER ______________________________

____

____

____

____

SNACKS ______________________________

____

____

____

____

San Mateo City Schools, CA Dept. of Ed.

NAME ______________________

HOW MANY SERVINGS

CIRCLE THE CORRECT ANSWER:

HOW MANY SERVINGS FROM THE BREAD-CEREAL GROUP SHOULD YOU EAT EACH DAY?

5 4 2 3

HOW MANY SERVINGS FROM THE MILK GROUP SHOULD YOU EAT EACH DAY?

3 1 2 5

HOW MANY SERVINGS FROM THE MEAT GROUP SHOULD YOU EAT EACH DAY?

4 3 2 1

HOW MANY SERVINGS SHOULD YOU EAT FROM THE VEGETABLE-FRUIT GROUP EACH DAY?

5 4 2 3

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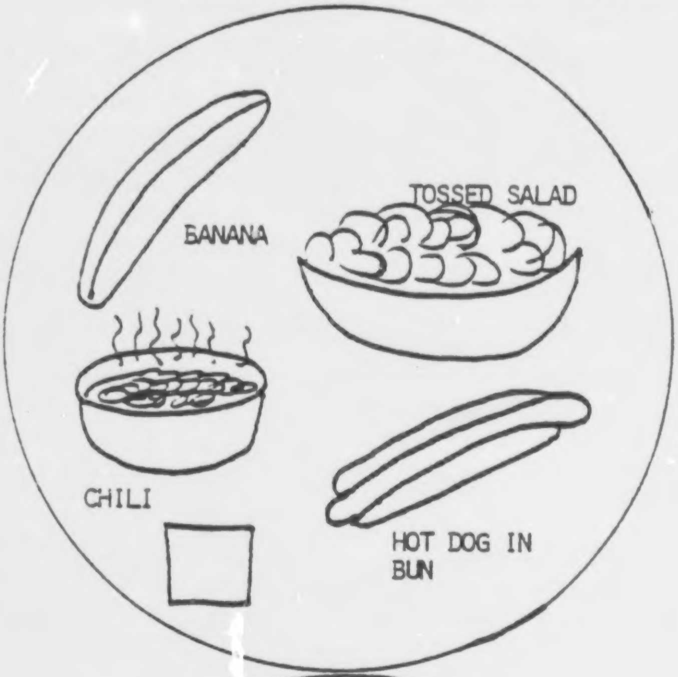
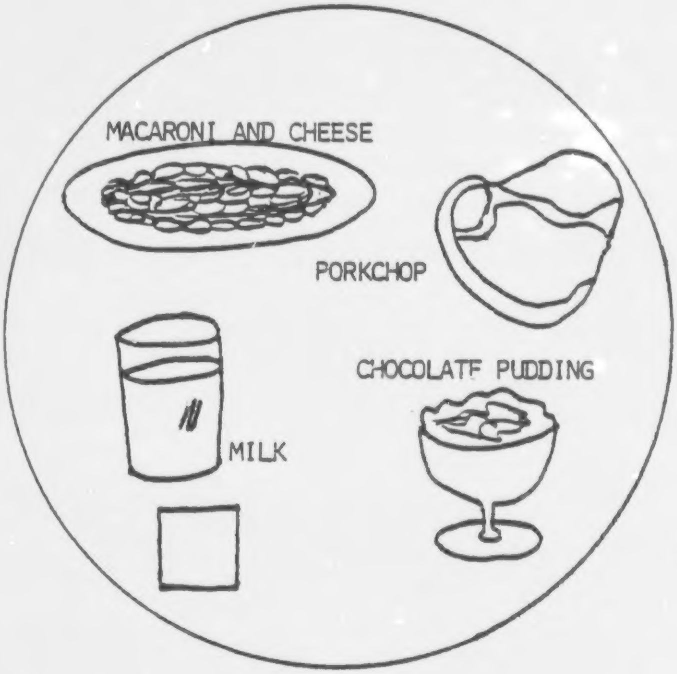
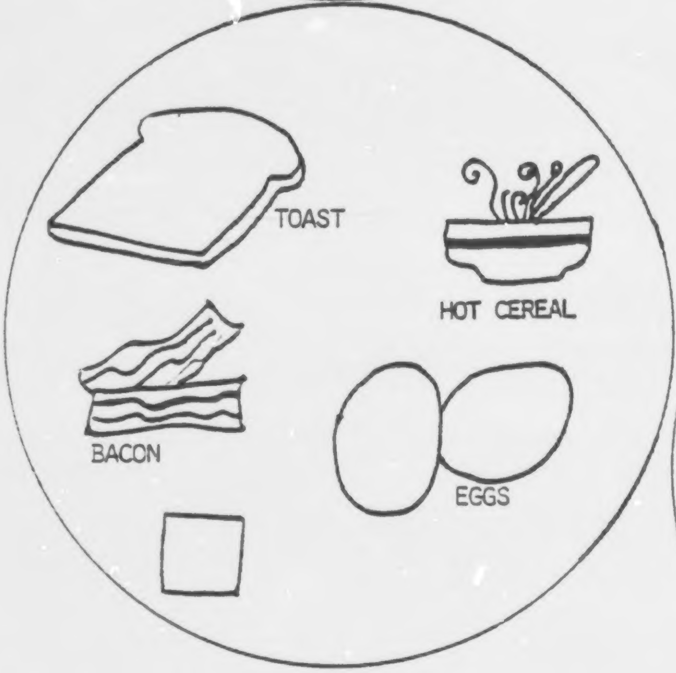
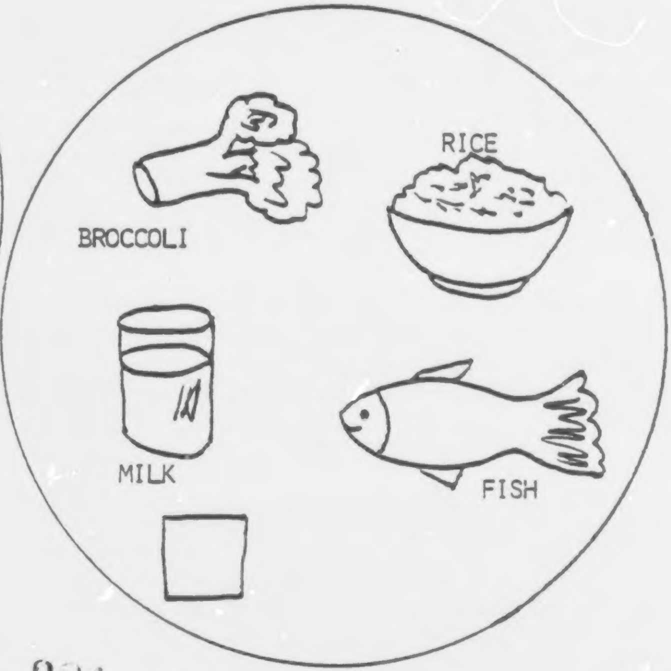
"X" MARKS THE SPOT

PUT AN "X" IN THE BOX THAT SHOWS ALL 4 FOOD GROUPS.


BANANA
TOSSED SALAD
CHILI
HOT DOG IN BUN
☐


MACARONI AND CHEESE
PORKCHOP
CHOCOLATE PUDDING
MILK
☐


TOAST
HOT CEREAL
BACON
EGGS
☐


RICE
BROCCOLI
MILK
FISH
☐

San Mateo City Schools, CA Dept. of Ed.

Concept A

Third Grade
Subject Area: Health

3

YOUR HEALTH IS TO KEEP:
FOOD RELATED HEALTH PROBLEMS

Behavioral Objective: The student will identify over/underweight and tooth decay as food related health problems.

Process Objective: Cause and effect; acquiring knowledge, predicting consequences.

Teacher Information: Nutrients are substances from food that are necessary for growth, energy and good health. Nutrition is the science of food and how the body uses the nutrients in the food.
Good Nutrition means getting the right amount of nutrients from the food we eat to maintain health, provide energy and promote growth .
Poor Nutrition means getting too much or not enough food nutrients for proper growth, good health and energy needs.
Overweight, underweight, tooth decay and other food related health problems are results of poor nutrition.
Poor snacks can contribute to overweight and tooth decay - Obesity is considered as 20% over normal weight, overweight as 10% over normal weight.

Materials: "George Gorge and Nicky Persnicky" filmstrip from Nutrition Series, Polished Apple - (Project SNAC)
"What's Best for Me?"- student worksheet
"Food - What's In It For Me?" - Bulletin Board Diagram

Vocabulary: Nutrition, nutrient, overeat, tooth decay

Motivation: Have students make a list of their favorite snacks and how often they snack between meals.

Development:

Show Filmstrip "George Gorge and Nicky Persnicky".

Discuss filmstrip and consequences of eating snacks high in sugar (tooth decay), sticky foods (tooth decay), and eating too much food high in sugar and fat, leading to overweight.

Analyze the students snack lists together as to the amount and kinds of food.

Review meaning of a 3-2-4-4 day - Snacks should come from these groups.

If all these requirements are not met, other health related problems such as underweight, bleeding gums due to lack of Vitamin C, weak bones and poor tooth development due to calcium lack could develop. These will be discussed in next 3 lessons.

"Extras" which include high fat foods, (butter, sour cream, whipped cream, mayonaise, margarine, potato chips, corn chips, etc.) and high sugar foods, (cake, candy, cookies, doughnuts, jam, soft drinks, popsicles and jello), give mostly calories but little food value and should be eaten only occasionally.

Frequent consumption of these foods can lead to tooth decay and overweight.
The dentist and doctor can also provide additional advice on foods to eat to avoid these problems.

Ask students to name other foods that are harmful to teeth; (sticky foods like marshmallows). Any sticky food, if eaten should be consumed with a meal instead of between meals or teeth should be brushed immediately after eating it.

Have students complete student worksheet "What's Best For Me?"

Evaluation:

Ask students to name two health related problems caused by eating too many foods high in sugar and fat.

Additional Activity:

Bulletin Board and Discussion: Refer to "Food What Is In It For You?" - Bulletin Board Diagram to make a living bulletin board or as a basis for discussion of how foods and nutrients maintain health.

Additional Resources:

Film: "What's Good To Eat" - (available from San Mateo City IMC) Shows relationship of food to weight.

NAME ____________________

WHAT'S BEST FOR ME?

CIRCLE THE FOODS THAT CAN CAUSE TOOTH DECAY:

MARSHMALLOW

APPLE

CARROT

KARMELCORN

JELLY DONUT

ROOT BEER

MILK

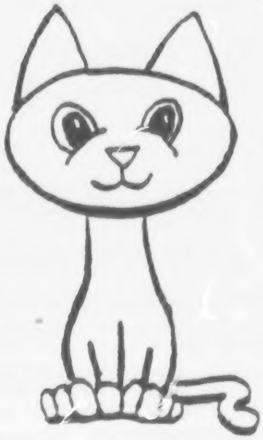
POPSICLE

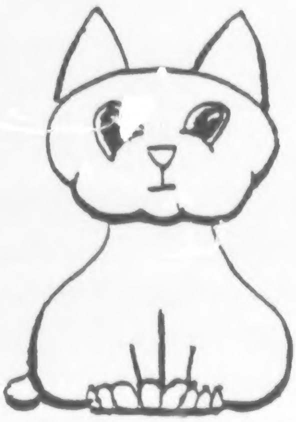
COOKIE

FRUIT SALAD

FIT OR FAT?

1. PEOPLE WHO DO NOT HAVE ENOUGH TO EAT GET VERY ______________. (FAT, SKINNY)
2. PEOPLE WHO EAT TOO MUCH FOOD USUALLY GET __________. (SKINNY, FAT)
3. PEOPLE WHO NEED TO LOSE WEIGHT SHOULD EAT ____________. (LESS FOOD, MORE FOOD).
4. PEOPLE WHO ARE SKINNY NEED TO EAT ____________. (LESS FOOD, MORE FOOD)

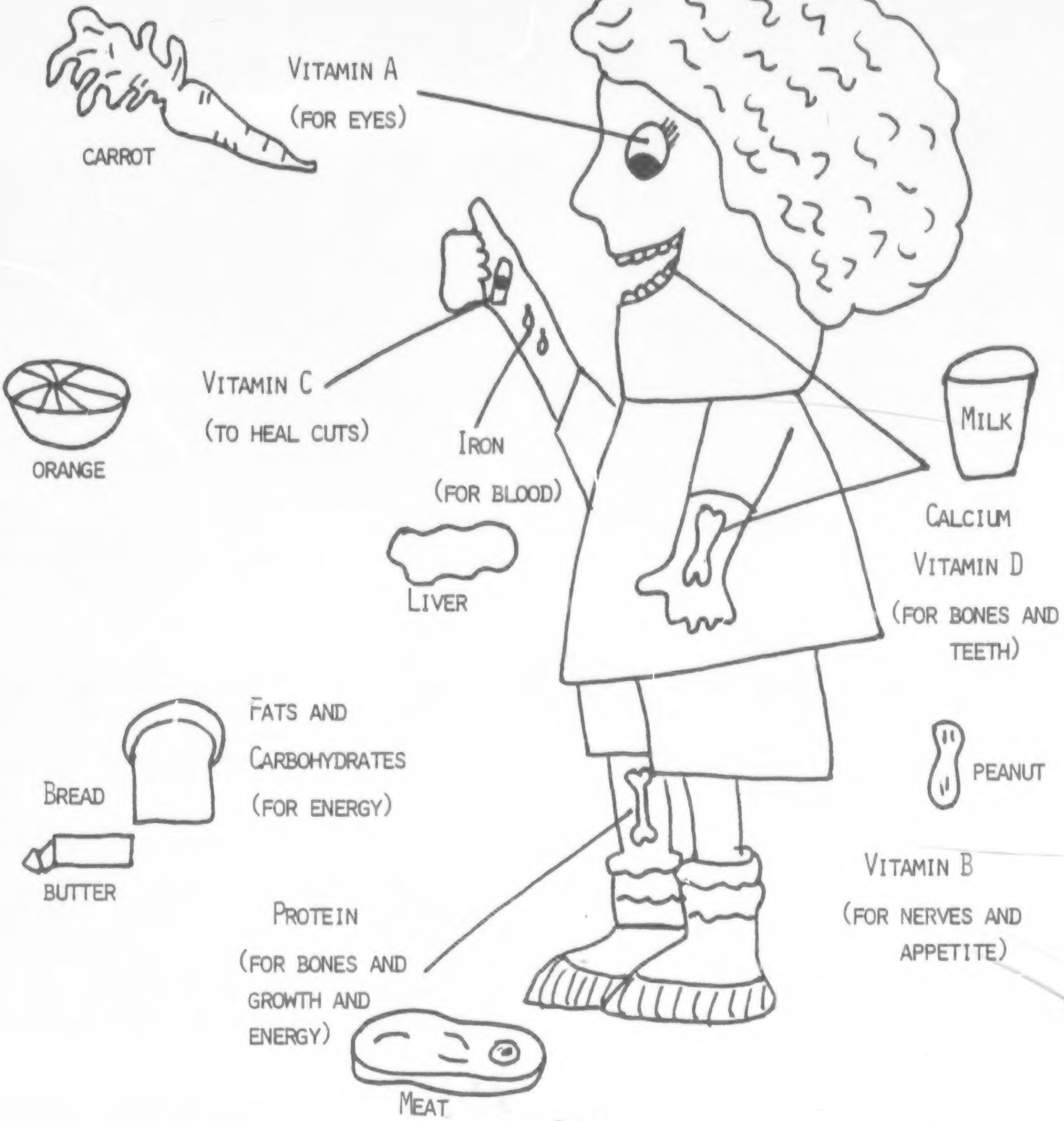




San Mateo City Schools, CA Dept. of Ed.

FOOD

WHAT'S IN IT FOR YOU?


VITAMIN A
(FOR EYES)
CARROT
VITAMIN C
(TO HEAL CUTS)
ORANGE
IRON
(FOR BLOOD)
LIVER
MILK
CALCIUM
VITAMIN D
(FOR BONES AND TEETH)
FATS AND CARBOHYDRATES
(FOR ENERGY)
BREAD
BUTTER
PEANUT
VITAMIN B
(FOR NERVES AND APPETITE)
PROTEIN
(FOR BONES AND GROWTH AND ENERGY)
MEAT

San Mateo City Schools, CA Dept. of Ed.

Concept A

Third Grade
Subject Area: Health

PROTEIN: THE BODY BUILDER

Behavioral Objective The student will identify food sources of protein.

The student will identify growth as the main function of protein.

Process Objectives: Acquaintance with the development of scientific method and major theories, categorizing; willingness to explore alternatives.

Teacher Information: Foods in the MILK group and MEAT group are good sources of proteins. Although students may be able to recall recommended number of servings from the milk group and meat groups and may be able to classify foods into each group correctly by rote memorization, the reasons why foods are grouped together - their similar nutrient content - should be introduced and emphasized throughout the study of the good groups.

Protein is a major nutrient which is used for tissue growth and repair. Protein also provides energy in the form of calories.

The Milk Group provides protein in milk, cheeses, and yogurt. The Meat Group includes protein rich foods from animals - meat, fish, poultry, eggs - and plant sources - nuts, seeds (sunflower) and high protein legumes such as soybeans, peanuts, dried beans, and dried peas.

For more advanced discussion if desired.

All proteins are made of little units called " amino acids" which are joined together in long chains. Digestion of high protein foods breaks the proteins apart into amino acids. The body can rearrange the amino acids to make new cells. This makes protein essential for growth of new cells and for replacement of cells that die.

The skin, muscles, organs, hair, and nails are made of protein so each day adequate protein must be eaten.

To get adequate protein everyday the following servings are recommended each day for 6 - 12 year olds.

Milk group - 3 servings per day
Meat group - 2 servings per day

The Bread-Cereal Group provides a small amount of protein, too. The recommended number of daily servings is 4.

Materials:

Posters: "Protein Foods" - Project SNAC
"Paul Protein" - U.S. Agric. Ext. Service
"Four Food Group" - National Dairy Council

Food models or pictures: Meat, fish, poultry, peanuts, milk, cheese, cottage cheese.
"Protein For Making Us Grow" and "Protein Fun Sheet", student worksheets.

Vocabulary: Protein, nutrient, body tissue, muscles, growth, sources, function

ACTIVITY

Motivation:

Post a "Four Food Group Poster" so the students can see it.
Show "Protein Poster" to introduce protein as one of the major nutrients.
In discussion, bring out these points:

Protein helps us grow and be strong.

Protein is a very important nutrient for health.

The recommended number of servings per day of high protein foods are:

Milk Group - 3 servings
Meat Group - 2 servings

Development:

1. Show a series of high protein food pictures and ask students to classify them according to food group. Include these foods: meat, fish, poultry, eggs, dried beans, peanut butter from the Meat Group: Milk, cheese, cottage cheese from the Milk Group. Conclude that Milk Group and Meat Group foods are high in protein. Emphasize that some high protein foods are from plant sources although most are from animals.
2. For seat work have students complete the two protein worksheets.

Evaluation:

Ask each student to list three high protein foods from the Milk Group and three from the Meat Group that they enjoy and to write one way protein is used by the body (growth, repair, build muscles).

Additional Activities:

1. Each day discuss which foods on the school Type A Lunch or in bag lunches are high in protein.
2. Ask students to name one high protein food they ate for dinner, breakfast, snacks.
3. Make a large display of high protein food pictures from magazines or drawn by students.
4. Prepare taste samples of high protein foods. Suggested low cost recipes attached. Throughout preparation of foods, emphasize that these foods are high in protein and that they are part of the high protein food groups, (Milk and Meat).
5. Send home recipe of foods prepared in class. (examples of recipes on page 21)

Additional Resources:

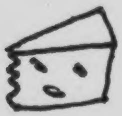
Filmstrip: "Meat Foods" / "Milk Foods" from Nutrition by Nystrom (Project SNAC)

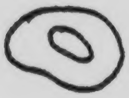
This has been introduced in Second Grade in discussion of 4 Food Groups.

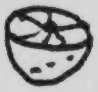
NAME________________________

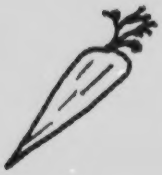
PROTEIN FOR MAKING US GROW

CIRCLE THE PROTEIN-RICH FOODS.


CHEESE


EGG


GRAPEFRUIT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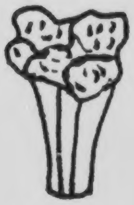
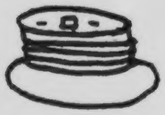
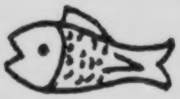

BROCCOLI


PANCAKES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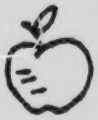
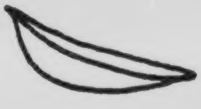
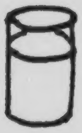

APPLE


BANANA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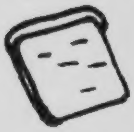
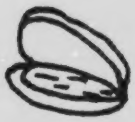
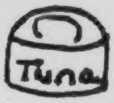
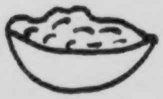
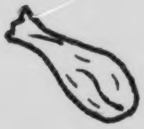
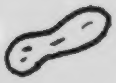

BREAD


HAMBURGER


TUNA


OATMEAL


CHICKEN

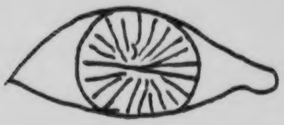

PEANUT

San Mateo City Schools, CA Dept. of Ed.

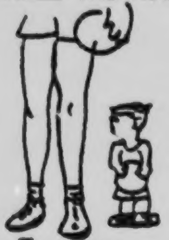
NAME ______________________________

PROTEIN FUN SHEET

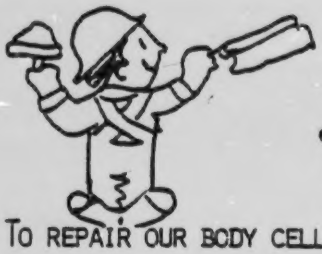
1. WE NEED PROTEIN FOR: (CIRCLE THE RIGHT ANSWERS)



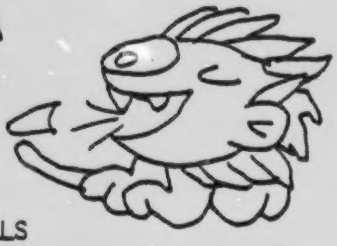
BLUE EYES



TO GROW



TO REPAIR OUR BODY CELLS



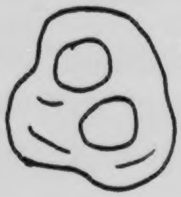
A DEEP VOICE

2. FOODS WITH LOTS OF PROTEIN ARE: (CIRCLE 4 FOODS)

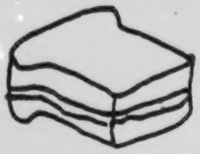
APPLE

CHICKEN LEG

TORTILLA



FRIED EGGS

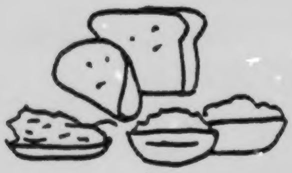


PEANUT BUTTER SANDWICH

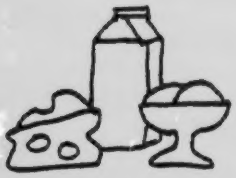
CHILI BEANS

3. I EAT FOODS FROM THESE 2 FOOD GROUPS BECAUSE THEY HAVE LOTS OF PROTEIN. (CIRCLE THE TWO FOOD GROUPS)

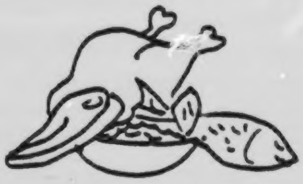
FRUIT-VEGETABLE GROUP



BREAD-CEREAL GROUP



MILK GROUP



MEAT GROUP

San Mateo City Schools, CA Dept. of Ed.

HIGH PROTEIN RECIPES

THREE BEAN SALAD (APPROXIMATELY 15 SMALL SERVINGS)

1 CAN KIDNEY BEANS (DRAINED) (HIGH PROTEIN FOOD)

1 CAN GARBANZO BEANS (DRAINED) (HIGH PROTEIN FOOD)

1 CAN CUT GREEN BEANS (DRAINED)

1 BERMUDA ONION, THINLY SLICED
(OR EQUIVALENT IN GREEN ONIONS)

1 GREEN PEPPER, FINELY CHOPPED (OPTIONAL)

HEAT TOGETHER 1/3 C. SALAD OIL, 1/3 C. VINEGAR, 1/2 C. SUGAR, 1/2 TSP. SALT, AND PEPPER AND POUR OVER BEANS, ONIONS, AND PEPPERS. LET STAND OVERNIGHT.

BEEF, BEAN, CHEESE MINI-TACOS (APPROXIMATELY 30 MINI-TACOS)

(NEED ELECTRIC SKILLET; OVEN IS OPTIONAL)

BROWN 1 LB. GROUND BEEF, ADD 1 PKG. TACO SEASONING MIX AND 3/4 CUP WATER. SIMMER 15 MINUTES. ADD 1 SMALL CAN REFRIED BEANS. PUT SPOONFUL OF THIS MIXTURE ON FLAT TORTILLA CHIP OR MINI-TACO SHELL. TOP WITH SLICED OR GRATED CHEDDAR CHEESE. HEAT IN OVEN UNTIL CHEESE MELTS. (IF DESIRED, SPRINKLE MINI-TACOS WITH GRATED PARMESAN CHEESE AND EAT WITHOUT HEATING IN THE OVEN.

THE BEEF, BEANS, AND CHEESE ARE ALL HIGH PROTEIN FOODS.

San Mateo City Schools, CA Dept. of Ed.

Concept A

Third Grade
Subject Area: Health

MILKY WAY TO HEALTHY BONES

Behavioral Objective: The student will list a source and function of the mineral calcium.

Process Objectives: Skill in engaging in the processes of observing, inferring and valuing; commitment to the inductive and deductive methods of verifying knowledge and testing values.

Teacher Information: Calcium is a major component of bones and teeth. It is a mineral and is found in milk foods, dark leafy green vegetables, and in fish bones, e.g. sardines.

- -

Materials:
Chicken bone (leg or thigh)
Vinegar
"Calcium bags" (Directions on bottom of page 24) fold out (Project
"Milk Foods Puzzle" student worksheet SNAC)
Cans, cartons, boxes with nutritional labels
"Do You Know About Calcium" - worksheet
"Meet Charles T. Calcium" - handout

- -

Vocabulary: calcium, absorb, phosphorous, rickets, deficiency, symptoms

ACTIVITY

Motivation: (An experiment to show that minerals make bones hard)

Bring a chicken leg or thigh bone to class. Let the children examine it closely. Make a list of adjectives to describe the chicken bone. Keep the list. Soak the chicken bone in vinegar for about one week. The bone will be soft and pliable. What happened? The vinegar contains a natural acid (acetic acid) in a mild form. The calcium and phosphorous is dissolved by the vinegar. Explain that this does not happen when we eat or drink vinegar.

Development:

Explain that human bones are made of minerals called calcium and phosphorous. Since our body cannot make these by itself, what should we do to get calcium and phosphorous to build strong bones? (Eat foods that contain them). Show "Milk Made the Difference" poster. Discuss the differences in size of the animals. The small skeleton is due to the lack of minerals (calcium and phosphorous) found in milk.

Show and discuss the calcium bags. Explain that as a person grows the bones grow and the body contains more calcium. These bags show why it is important to eat enough calcium containing foods during growth.

Make a list of foods that contain calcium by reading nutrition labels. Find the word calcium on the label. If one serving of the food contains 15% or more of calcium requirements, it is a good source. Which foods are good sources of calcium? (Milk, cheese, yogurt, dark leafy green vegetables, sardines. Give each student a copy of "Meet Charles T. Calcium".

Evaluation:

Have students complete "Do You Know About Calcium?" student worksheet.

Additional Activities:

1. Have a tasting party of calcium rich foods using the recipes on page 24.
2. Vitamin D is called the sunshine vitamin. Discuss the importance of getting enough sunshine and fresh air to be as healthy as possible. Explain the role of vitamin D in developing strong bones. (Vitamin D helps the body use calcium.)

   Read the label of the milk carton to find the word: "Vitamin D". Are any other vitamins added? (Probably Vitamin A in low fat milk.)
3. Have students fill out "Milk Foods Puzzle" student worksheet.

Homework

As a homework assignment, have the students read the milk carton in their refrigerator at home to see if it says Vitamin D and Vitamin A. Have them read the nutrition label on the milk carton to read how much calcium, Vitamin D, and Vitamin A one glass of the milk will provide. The label will tell the percentage of the U.S.R.D.A. in one 8 oz. glass.

In class discuss the recommended number of Milk Group foods (3). Why is this important for growing boys and girls? (for strong bones and teeth)

Additional Teaching Considerations: Alternate Calcium Sources

Dark leafy greens are rich in calcium. Spinach is the exception because the calcium cannot be absorbed by the body.

In many cultures where milk and cheese are not available or are not popular, dark leafy green vegetables, soybeans and soybean milk and small fish with bones, such as sardines, are the main sources of calcium.

A true milk allergy which prevents any milk products from being eaten is usually treated with calcium tablets.

Many children throughout the world, especially those other than of Western European ancestry, with an intolerance to milk sugar (lactose) may limit the amount of fluid milk that may be eaten without causing stomach upset and diarrhea. In these cases, fermented milk products which have less milk sugar content can be consumed in place of milk to meet the calcium requirement. These products include yogurt, aged cheese, kefir, sweet acidophilous milk.

Foods made from milk which are not good sources of calcium include BUTTER, CREAM, SOUR CREAM, and WHIPPED CREAM. These are mostly the fat part of the milk. The calcium is in the liquid part of the milk.

Additional Resources:

Film - "What's Good To Eat" (available from the District IMC)
Cover minerals.

TASTING PARTY HIGH IN CALCIUM

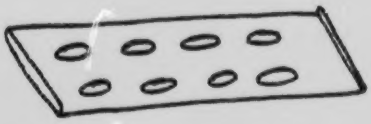
Taste individual foods high in calcium, or use recipes for calcium-rich foods below.

FOODS HIGH IN CALCIUM

Milk Group	Dark Leafy Green Vegetables
milk - all kinds (fresh, dried, canned)	collard greens
Yogurt	dandelion greens
cheese	kale greens
ice cream	mustard greens
custard made with milk	turnip greens
cream soups make with milk	
foods make with lots of milk or cheese	

CALCIUM RECIPES

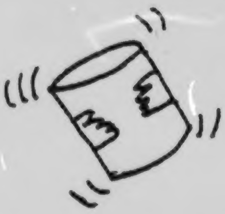
CHEESE PUFFS



2 cups grated cheese (cheddar)
½ cup margarine
1 cup sifted all purpose flour
¼ tsp. salt

1. Mix all ingredients together in large bowl. Roll into small balls and place 2 inches apart on baking sheet. (ungreased)
2. Flatten each ball slightly
3. Bake 12 - 15 minutes at 425° F

SHAKE-a-PUDDING



For each 4 servings of ½ cup
1 box (3oz) instant pudding
2 cups cold water
½ cup dry milk

1. Shake the water and milk in a tight jar. Add pudding and shake again very well. Pour into serving dishes. Let it stand for one minute or until set.
2. Serve with spoons or tongue depressors.

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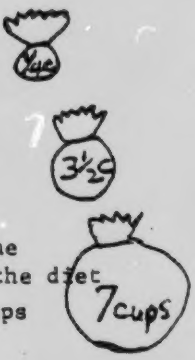
CALCIUM BAGS



Calcium bags are inexpensive and impressive to make to show the amount of calcium in the body at different ages.

Materials: 3 plastic bags with ties (2 large, 1 small)
11 cups of white detergent or white powdery substance

Directions: Fill plastic bags with the amount of powder to represent body calcium as listed. Because the bones and teeth increase in size with age, the amount of calcium in the body varies with age. This increasing amount explains the importance of adequate milk or other calcium sources in the diet.

Newborn baby-½ cup 10-year old-3½ cups fifteen year old-7cups
(Label each bag clearly and discuss differences)

NAME ______________________________

DO YOU KNOW ABOUT CALCIUM?

CHOOSE FROM THESE WORDS TO FILL IN THE BLANK SPACES:

THREE
LEAFY GREENS
MILK
MINERAL
TEETH
CHEESE

1. CALCIUM IS A ____________________ THAT HELPS ME HAVE STRONG BONES AND ________________________.

2. THE ____________________ I DRINK HAS LOTS OF CALCIUM IN IT.

3. ANOTHER FOOD THAT GIVES ME CALCIUM IS __________________________.

4. BOYS AND GIRLS MY AGE SHOULD HAVE AT LEAST ____________________ SERVINGS FROM THE MILK GROUP EVERY DAY.

5. A FOOD MADE FROM MILK THAT IS FULL OF CALCIUM IS ________________.

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MEET CHARLES T. CALCIUM

CHARLES CALCIUM WILL TELL YOU
THAT THE "T" STANDS FOR TEETH.
HE HELPS BUILD STRONG, HEALTHY
TEETH AND BONES.

CHARLES CALCIUM LIVES IN MILK GROUP FOODS SUCH AS MILK, CHEESE, YOGURT, COTTAGE CHEESE, ICE CREAM, PUDDING AND CUSTARD.

CHARLES CALCIUM ALSO LIVES IN PLANT FOODS SUCH AS LEAFY GREEN VEGATABLES, BROCCOLI, CANTALOUPE, AND SWEET POTATOES.

CHARLES CALCIUM IS A MINERAL AND HE DESCRIBES HIS WORK THIS WAY.

"CHILDREN WHO ARE GROWING FAST NEED LOTS OF ME SO THEIR BONES AND TEETH WILL BE STRONG. I ALSO GO TO THE MUSCLES, ESPECIALLY THE HEART, TO KEEP THEM IN GOOD SHAPE. I HELP CLOT BLOOD, TOO."

NAME ______________________

MILK FOODS PUZZLE

DIRECTIONS: READ THE CLUE. FIND THE ANSWER IN THE WORD LIST. SOME WORDS ARE NOT USED. PUT ONE LETTER IN EACH BOX.

CLUES

DOWN

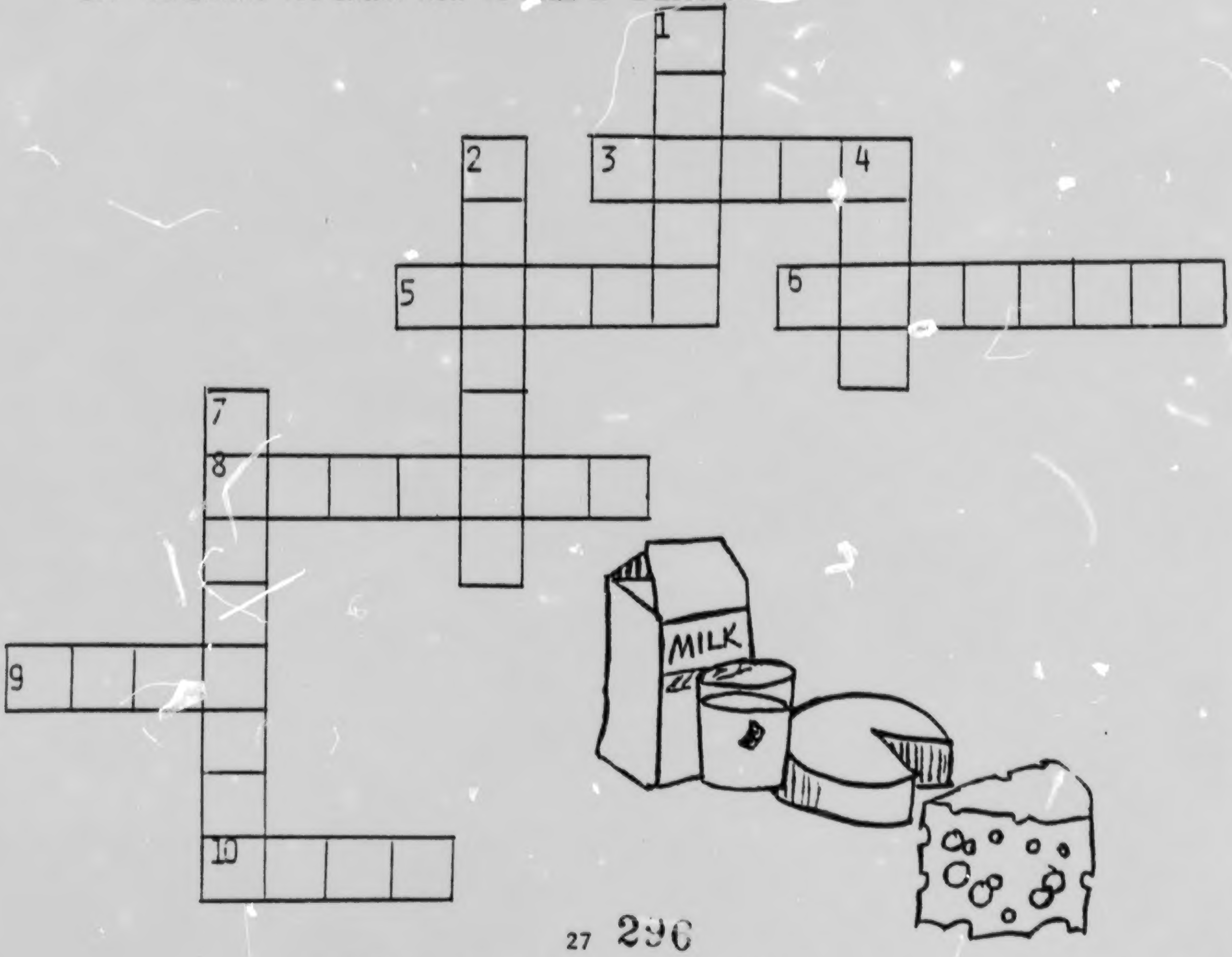
1. A FOOD IN THE MILK GROUP USED IN SANDWICHES.
2. THIS NUTRIENT MAKES YOUR MUSCLES STRONG.
4. THE VITAMIN A IN MILK HELPS YOU HAVE GLOSSY, SHINY __ __ __ __.
7. A FROZEN FOOD MADE FROM MILK.

ACROSS

3. CALCIUM IN MILK HELPS BUILD STRONG __ __ __ __ __ TO HELP YOU CHEW YOUR FOOD.
5. CALCIUM HELPS BUILD STRONG, STRAIGHT __ __ __ __ __ TO HELP YOU STAND UP STRAIGHT.
6. THIS NUTRIENT IS ADDED TO MILK. YOU ALSO GET IT FROM SUNSHINE IN THE SUMMER.
8. MILK IS MOST FAMOUS FOR THIS MINERAL.
9. HOW MANY SERVINGS DO YOU NEED FROM THE MILK GROUP EVERY DAY?
10. SOMETHING YOU DRINK THAT IS FULL OF CALCIUM.

CHOOSE FROM THIS WORD LIST

THREE
TEETH
CHEESE
HAIR
CALCIUM
ICE CREAM
PROTEIN
MILK
BONES
FOUR
MUFFINS
VITAMIN D



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THE A B C'S OF EATING

Behavioral Objective: The student will identify the fruit/vegetable group as the major food source of Vitamins.

Process Objectives: Explaining items of identified information; relating points to each other; determining cause and effect relationships.

Teacher Information: Vitamin families are given letter names A, B, C, D, E, and K. The B Vitamin family appears in many forms, each with a separate function, but all are part of the B complex. Vitamin C and all B vitamins cannot be stored so the body needs a good supply each day. Vitamins A, D, E, and K are fat soluble and are stored in the body. All vitamins are catalysts which help the body functions operate normally. They do not become part of the body's structure. Minerals are chemical elements which become part of the body structure. For example calcium and phosphorous are a part of the teeth and bone structure. For more information on vitamins, see pages 30 and 31.

- -

Materials: Vitamin Alphabet poster (Project SNAC)

- -

Vocabulary: Vitamin A, Vitamin C, spinach, food sources, citrus

ACTIVITY

Motivation:

Ask students to tell what they know about vitamins, what they do and and where to find them.

Development:

1. **Vitamin A:** Show and discuss the Vitamin Alphabet poster.

   Vitamin A functions: normal eyesight
   (especially night vision)
   normal growth
   healthy skin

   Foods: Best sources are dark leafy green vegetables, (spinach, chard) and deep yellow and orange fruits and vegetables (spinach, carrots, apricots)

   Animal foods high in Vitamin A are milk, butter, liver, egg yolks.

2. **Vitamin C:** Show the Vitamin Alphabet poster. Point out that the best source of vitamin C is fresh fruits and vegetables, especially fruits called CITRUS.

   Make a list of citrus fruits that the children can name. (orange, lemon, lime, tangerine, grapefruit)

   Vitamin C functions: Healthy gums
   Fast wound healing
   Healthy blood vessels

3. Using Vitamin Alphabet poster, discuss briefly the functions and food sources of Vitamins B and D. Point out that Milk is fortified with Vitamin D because Vitamin D is necessary for the utilization of calcium by the body. Vitamin A may also be added to low fat milk because the fat (which contains the Vitamin A), has been removed.

4. For Teacher Information:

VITAMIN ALPHABET

Vitamins	What it does	Foods
A	Healthy eyes Healthy skin and bones	Spinach, broccoli, chard, etc. Carrots, yellow squash, apricots Milk, butter, liver
B	Healthy nerves Good digestion	Enriched breads and cereals Pork Eggs
C	Healthy gums Healthy blood vessels Healthy	Citrus fruit Fresh vegetables Strawberries Tomatoes Potatoes
D	Healthy bones	Fortified milk Liver (Sunshine)

Evaluation:

As you name each vitamin (A,B,C,D,) have students write the name of a food high in that vitamin. Have students trade papers and check another students answers. Correct any errors by asking the class to vote on each answer which is questionable.

Additional Activities:

1. Cooking Activity: Select one vegetable high in Vitamin A and one fruit high in Vitamin C for simple tasting or preparation. (See "Vitamin A Food Experiences" on page 32 and "Vitamin C Food Experiences" on page 33.)

2. If filmstrip "You Are What You Eat" is shown, have students complete V-I-T-A-M-I-N-S worksheet. (attached)

3. Have students complete "I Am A Vegetable" and "Cut Me In Half" worksheet puzzles, and "Vitamins Added To Milk" worksheet. (attached)

Additional Resources:

1. "Annie A" and "Sally C" posters and funsheets from EFNEP, U.C. Extension (available in Project Resource Center)

2. "You Are What You Eat", filmstrip from You Are What You Eat series, SCI (District IMC)

3. Vitamin A and C posters (Project SNAC)

4. Get Aboard The Good Ship Vitamin C booklet.

MORE INFORMATION ON VITAMINS

NUTRIENT	IMPORTANT FOOD SOURCES	FUNCTION	STABILITY TO COOKING, DRYING, LIGHT, ETC.	CONSERVATION OF NUTRIENT
Vitamin A	Egg Yolk Butter, margarine Green & Yellow Vegetables Apricots	Healthy skin, bone, eyes	Destroyed in rancid fats, little loss in food preparation	Store fats in cool, dry place
Vitamin B_1 (Thiamin)	Pork Liver Whole Grains Enriched cereals & breads	Healthy nerves, good morale. Release energy from carbohydrates	Highly soluble in water	Cook in least amount of water possible. Use cooking water for other items - do not discard
Vitamin B_2 (Riboflavin)	Milk Meat Eggs Enriched Cereals & Breads	Healthy skin, eyes	Destroyed by light; water soluble	Store milk in dark place; use cooking liquid - do not discard
Vitamin C	Citrus Fruits Strawberries Cantaloupe Tomatoes Potatoes	Prevents bleeding gums, speeds wound healing	Very unstable, destroyed by heat, light, drying, exposure to air, copper, iron, alkalai (soda); highly water soluble	Do not cook fruits & vegetables in copper or iron pots. Cook fruits & vegetables in tightly covered cooker - smal amount water. Store frozen fruits & vegetables at 0° to -20° F. to prevent loss. Do not store canned foods at high temperature for long periods. Serve or cook with skin on to prevent vitamin C from leaching into soaking or cooking water. Do not dice very small for cooking, or allow to sit out.
Vitamin D	Vitamin D Fortified Milk Fish liver oils	Healthy bones - Can't use calcium without it	Stable in ordinary cooking and storage	No special care needed.

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MAJOR FOOD SOURCES OF VITAMINS A & C

A

Fruit Vegetable Group

- Dark leafy green vegetables
  - spinach
  - dandelion
  - kale
  - collards
  - mustard & turnip greens
  - swiss chard
  - bok choy
- Deep yellow fruits & vegetables
  - carrots
  - pumpkins
  - sweet potatoes
  - winter squash
  - cantaloup
  - apricots

Meat Group

- liver
- eggs

Extras

- butter
- fortified margarine

C

Fruit Vegetable Group

- Citrus fruits
  - orange
  - grapefruit
  - lemon
  - tangerine
- peppers, sweet or hot
- strawberries
- cabbage
- broccoli
- tomatoes
- greens
  - turnip
  - collard
  - kale
  - mustard
- brussels sprouts
- cactus

Vitamin A Food Experiences

Vitamin A Salad - for healthy eyes and skin.

spinach
carrots
egg
bottled dressing

grater
large bowl
serving spoon
tasting forks
tasting cups or plates

Wash and tear spinace leaves. Grate the carrot. Boil the egg until hard. Cool, peel, and chop the egg. Toss with bottled dressing. Bacon Bits are optional.

Steamed Greens

Choose from

mustard greens
kale
collards
dandelion greens
beet greens
turnip greens

UTENSILS

large pot
steaming rack (optional)
heating element
salt - optional
vinegar - optional
tasting forks
tasting cups

Wash greens carefully to remove all sand. Tear off stems. Cook the leaves in a pot or steamer until very tender. * Salt and vinegar may be added.

*
Note: Vitamin A is not destroyed by heat, light, or air. It is not dissolved in water. Many people do not eat enough Vitamin A foods because they don't eat many fruits and vegetables.

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Vitamin C Food Experiences

1. Tell the story about sailors and scurvy by reading "Get Aboard the Good Ship Vitamin C". (Florida Citrus Commission) Available from Project SNAC

2. Make a Vitamin C Fruit Punch

   1 can (6oz) frozen orange juice

   1 can (6 oz) frozen lemonade

   5 cups very cold water

   16 oz (2 cups) ginger ale, chilled.

   This recipe makes 16 servings of 1/2 cup (4oz) each.

3. Make a Vitamin C Coleslaw

   1 head cabbage

   1/2 cup water

   1 carrot, grated

   juice of one lemon

   1/4 cup honey

   Grate the cabbage. Mix the remaining ingredients to make a dressing. Toss with the grated cabbage.

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NAME ______________________

VITAMINS

AFTER YOU WATCH THE FILMSTRIP "YOU ARE WHAT YOU EAT" ANSWER AS MANY OF THESE QUESTIONS AS YOU CAN.

1. CIRCLE THE LETTERS THAT ARE THE "NAMES" OF VITAMINS.

   A N R C F D W B E

   DID YOU CIRCLE FIVE LETTERS?

2. MATCH THE FOOD TO HOW ITS VITAMINS HELP YOUR BODY STAY HEALTHY.

   HEALTHY GUMS
   HEALTHY EYES
   HEALTHY NERVES
   HEALTHY BONES

   VITAMIN A
   VITAMIN B FAMILY
   VITAMIN C
   VITAMIN D

3. WRITE THE NAME OF A FOOD THAT IS FULL OF THESE VITAMINS:

   VITAMIN A ______________________

   VITAMIN B ______________________

   VITAMIN C ______________________

   VITAMIN D ______________________

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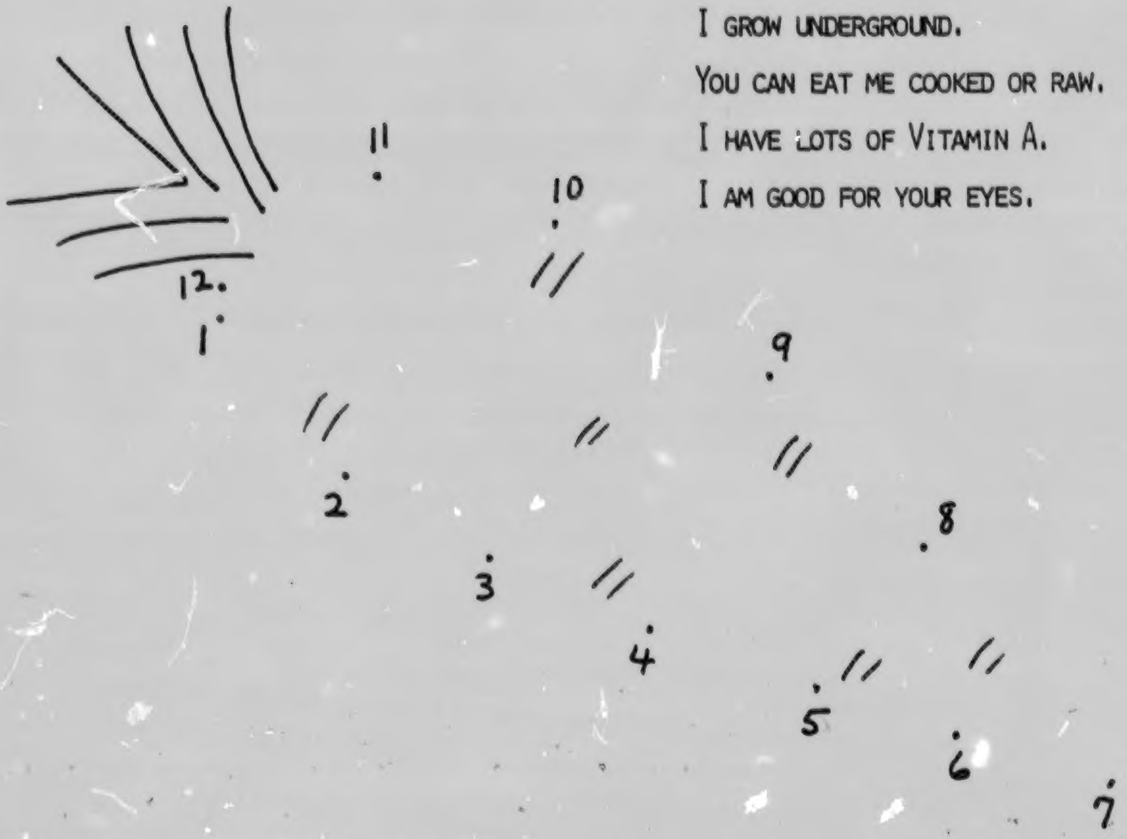
NAME________________________

I AM A VEGETABLE

I AM A VEGETABLE.
I GROW UNDERGROUND.
YOU CAN EAT ME COOKED OR RAW.
I HAVE LOTS OF VITAMIN A.
I AM GOOD FOR YOUR EYES.



WHAT AM I?________________________

DRAW A VEGETABLE YOU EAT.

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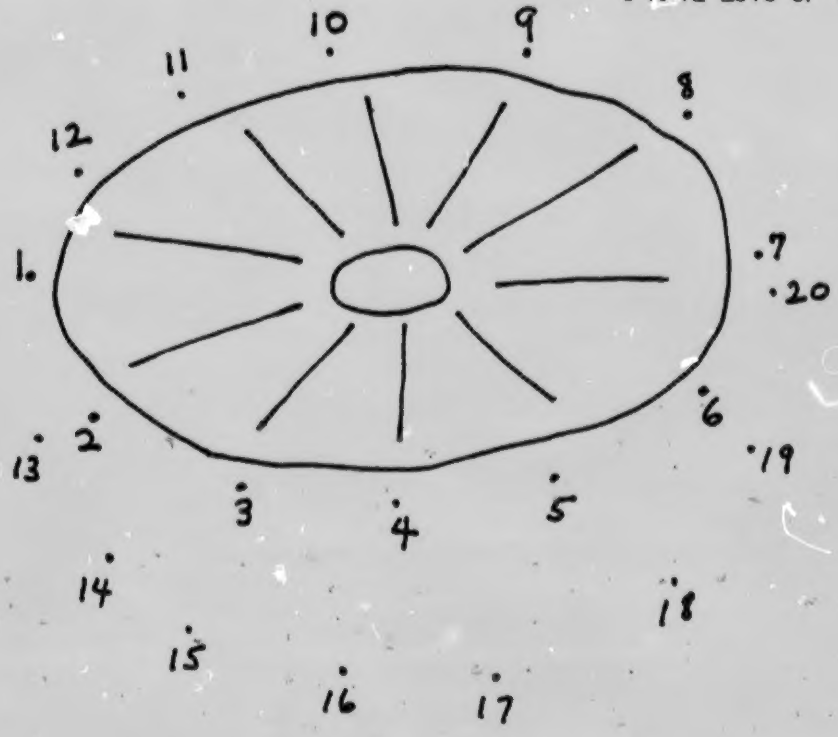
NAME________________________

CUT ME IN HALF

CUT ME IN HALF AND EAT ME WITH A SPOON.

I AM YELLOW.

I HAVE LOTS OF VITAMIN C.


1.
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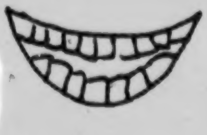
20

VITAMIN C. IS GOOD FOR YOUR GUMS AND SKIN. IT HELPS HEAL CUTS, TOO.



NAME ____________________

VITAMINS ADDED TO MILK

1. CAN YOU FIND THE NAMES OF TWO VITAMINS THAT ARE ADDED TO THIS MILK? WHAT ARE THEIR NAMES?

VITAMIN ______________

VITAMIN ______________

DO YOU KNOW HOW THESE VITAMINS HELP YOU STAY HEALTHY?

2. WRITE THE NAME OF THE VITAMIN THAT HELPS YOU HAVE HEALTHY EYES.

____

3. WHICH VITAMIN HELPS YOUR BONES STAY STRONG?

____

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Concept E

Third Grade
Subject Area: Science

FOOD SPOILERS

Behavioral Objective: The student will identify two or more sanitation procedures that should be practiced when handling food or storing food.

Process Objectives: Skill in engaging in the processes of observing, inferring, and valuing, discussing cause and effect.

Teacher Information: Students will understand the need for careful food handling when they have been introduced to the food spoilers - bacteria, yeasts, and molds. These spoilers can be destroyed or reduced to safe numbers by careful handling and preparation. Food companies take special care to prevent food spoilers from hurting food. The Level 3: Health and Growth Tex has a good coverage of food spoilers which are called "Microbes". Yeasts are not mentioned but experiment #3 produces the sour smell associated with yeast.

- -

Materials: "Meet The Food Spoilers" - handout, one per student, or enlarged poster
Magnifying glass
Food samples: (select 1 or more)

Experiment #1	slice of apple, banana, and cooked potato
Experiment #2	2 slices of bread
Experiment #3	dried beans - 1/2 cup
	flour - 4 tablespoons

plastic wrap or aluminum foil
2 plates and 4 plastic or glass containers
"Where Should These Foods Be Stored?" - student worksheet
"Meet The Food Spoilers" - student worksheet
"Snacks In A Sack" - handout, one per student

- -

Vocabulary: microbes, spoilers, bacteria, yeast, mold

ACTIVITY

Motivation:

Invite students to tell about times they have seen spots on fruit, bread. Have they ever noticed when a food smells bad?

Explain that funny spots and bad smells are caused by microbes. Microbes are found everywhere-air, dirt, hands. Some are helpful, some are harmful.

Developement:

1. Introduce the "food spoilers" by using "Meet the Food Spoilers" - handout on page 41.
   Review the three things the food spoilers need to live and grow.
   a. Warmth - (they can't live in the cold)
   b. Food
   c. Moisture

2. Discuss ways used to keep bacteria from spoiling our food. We store food in refrigerators and freezers. Canneries heat foods to high temperatures to kill bacteria. Milk is pasteurized. Some foods are dried.

Invite discussion of ways the students can keep the microbes away from food they eat. (Wash hands to remove germs before eating, make sure the kitchen and dishes are clean, inspect food before eating it, put foods away in the right place.)

3. Choose one or more of the following experiments to do:

Experiment #1

To see how microbes from the air settle on food and grow the following experiments can be done in class.

Put a slice of banana, a slice of apple, and a slice of cooked potato on a small dish. Let the food stand in the open for an hour. Cover the dish with aluminum foil. Put the dish in a warm, dark place.

Uncover the dish and look at the food every day. In two or three days you will see groups of microbes. Some may be smooth and shiney. Others may be fuzzy, thread-like molds. If there is a magnifying glass in your classroom, look at the microbes through it.

Experiment #2

Mold growth on bread. to show that microbes (mold spores) are in the air.

a. Moisten a slice of bread slightly.
b. Put it on a plate in the open air for one hour.
c. Cover the plate with aluminum foil or plastic wrap.
d. Look at the slice of bread every day with a magnifying glass if possible.
e. First you will see white mold, then little black balls. Compare with pictures on page 142 of Health and Growth: Level 3.

Experiment #3

This experiment shows that microbes need moisture to grow.

a. Put some dry beans in two glasses. Cover beans in one glass with water.
b. Put several spoons of flour in two glasses. Cover flour in one glass with water.
c. Watch the glasses for three or four days. Find out which foods begin to spoil - the dry ones or the ones in water. The spoiled ones will smell sour due to the yeast formation.

4. Give each student a copy of "Snacks In A Sack" handout to take home. Discuss in class its importance.

5. Have students complete "Where Should These Foods Be Stores?" - student worksheet.

Evaluation:

Have students complete "Meet The Food Spoilers" - True, False worksheet.

Additional Activities:

A. Homework (for individual or whole class participation)
These are both done more easily at home than at school.

1. Find out how cold temperatures slows down the growth of microbes.
    - a) Moisten two slices of bread.
    - b) Put the slices of bread on two separate plates. Let them stand in open air for one hour.
    - c) Cover each plate with aluminum foil.
    - d) Put one plate of bread in the refrigerator and one in a warm place.
    - e) Look at the two slices of bread every day.
    - f) Notice how each looks after three or four days. Draw a picture.
2. Look around the kitchen at home and find some foods that are kept from spoiling because they are dried. Make a list and bring it to class to share.

B. Library Research:

Read a book or story about the pioneers to find out how they kept foods from spoiling when there were no refrigerators.

Pioneers preserved foods by drying them, salting them, smoking them, and pickling them.

C. Field Trip:

A follow-up trip to a restaurant kitchen or a supermarket will give students a chance to see how food is kept safe - cold, covered, clean. Milk products have a "pull date" on each carton to indicate the date after which it should not be sold. The supermarket helps keep the quality of food high by removing these cartons from the shelf.

Additional Resources:

Health & Growth: Level 3, Chapter 6 - pages 158-159
by Scott, Foresman and Co.

Microbes at Work by Millicent Selsam (Morrow) (Library)

The True Book of Bacteria by Anne Frahm (Children's Press) (Library)

Meet The Food Spoilers

These are food spoilers.

Mold

forms fuzzy patches

Yeast

makes food smell bad

Bacteria

makes food taste bad
makes it soft and slimy

Like other living things, the food spoilers need food, warmth, and water to live and grow. When food is spoiled it can make you feel sick. That's why it is important to make sure that food stays clean. There are four important rules to follow to keep food safe.

Food Safety Rules

1. Always wash your hands before you touch food.
2. Always keep the kitchen and dishes clean.
3. Put food in the right place for storage.
4. Don't eat food that is spoiled.

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Danger!

Snacks in a Sack

A WARM LOCKER OR DESK CAN PLAY BAD TRICKS ON YOUR "TUMMY" IF YOUR BAG LUNCH HAS IN IT. . . .

1. AN EGG SANDWICH
2. A HAM SALAD SANDWICH
3. MAYONNAISE
4. CHICKEN OR TURKEY
5. DEVILED EGGS
6. CREAM PUFFS
7. CHOCOLATES WITH COCONUT

BE SAFE—AND FUN-TRITIOUS BY BRINGING A PEANUT BUTTER SANDWICH, RAW VEGETABLE STICKS, FRUIT AND GRAHAM CRACKERS. (WARM DESKS CAN'T HURT THESE FOODS—OR YOUR "TUMMY".)

ARE YOUR SNACKS IN A SACK SAFE?

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NAME______________________

WHERE SHOULD THESE FOODS BE STORED?

TO MAKE SURE FOOD IS SAFE TO EAT IT SHOULD BE STORED IN THE RIGHT PLACE. DO YOU KNOW WHERE THESE FOODS SHOULD BE KEPT?

DIRECTIONS:

WRITE "R" IN FRONT OF EACH FOOD THAT SHOULD BE KEPT IN THE REFRIGERATOR.

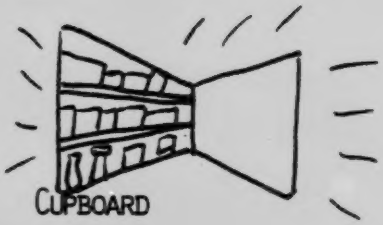
WRITE "F" IF THE FOOD SHOULD BE PUT IN THE FREEZER.

WRITE "C" IF THE FOOD CAN BE STORED SAFELY IN THE CUPBOARD.

1. _____ CARTON OF MILK
2. _____ SUGAR
3. _____ CEREAL
4. _____ MEAT
5. _____ LETTUCE
6. _____ BUTTER
7. _____ EGGS
8. _____ HOT DOGS
9. _____ FROZEN CORN
10. _____ TANG
11. _____ BREAD
12. _____ ICE CREAM
13. _____ RAISINS
14. _____ APPLES
15. _____ SALT
16. _____ T.V. DINNERS
17. _____ CANNED PEACHES
18. _____ JELLY

REFRIGERATOR

FREEZER


CUPBOARD

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NAME ______________________________

MEET THE FOOD SPOILERS

TRUE OR FALSE

FOOD SPOILERS NEED FOOD. ____________

FOOD SPOILERS LIVE IN VERY COLD PLACES. ____________

FOOD SPOILERS IN MILK WILL DIE IF THEY ARE BOILED. ____________

FOOD SPOILERS CANNOT LIVE WITHOUT WATER. ____________

FOOD SPOILERS CAN LIVE IN DRIED FOOD. ____________

FOOD SPOILERS ARE CALLED MICROBES. ____________

MILK SHOULD BE LEFT ON THE COUNTER OVERNIGHT. ____________

IT IS IMPORTANT TO WASH YOUR HANDS BEFORE YOU EAT. ____________

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Concept C

Third Grade
Subject Area: Social Science

FOOD RELATED CAREERS

Behavioral Objective: The student will match job titles with the food processing job involved.

Process Objectives: Belief in the dignity and worth of others; acquaintance with the people and events that have shaped the present society.

Teacher Information: This instructional lesson is designed to help students at primary grades to understand that there are many job opportunities in growing, processing, delivering selling and preparing food.

The specific example may be changed from cornflakes to any other food product.

- -

Materials:

Food examples or containers to be discussed
"Who AM I?" - game directions
"Food Helpers, How Many Do You Know" - student worksheet
"Food Career" - crossword puzzle
"Food Careers Matching Sheet" - student worksheet

- -

Vocabulary: farmer, trucker, miller, baker, railroad worker, grocer delivery person

ACTIVITY

Motivation:

Inform students that in order for us to have the food we eat many people work to grow it, package it, sell it and transport it.

Development:

1. Hold up a food item/package and ask the following:
    - A. Where was it bought, and who works there?
    - B. Who brought it to the store and where did that person get it?
    - C. Who made it? Where did he get the ingredients?
    - D. Who grew it? Who helps the person who grew it?
2. Write names of workers on the board, as you go along.
3. Repeat with other items such as much, meat, fruits - (canned, fresh).

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4. Have students play "Who AM I?" game and complete "Food Helpers, How Many Do You Know?" student worksheet.
5. Have students complete "Food Career" crossword puzzle. Go over answers with students.

Evaluation:

Have students complete the "Food Careers Matching Sheet".

Additional Activities:

1. Show one of the suggested filmstrips listed under Additional Resources.
2. Have students "be farmers" in class by growing Alfalfa Sprouts.
3. Have students "process" a food by making butter, or by drying some fruits or begetables.
4. Taste a food in unprocessed and processed forms - (canned, dried, frozen)
5. Cornflakes: Divide students into groups of 5 and have each group complete Part I of "Food Helpers" - (worksheet attached).
6. Study Prints of Food Helpers: Borrow suggested study prints from IMC and post for students to complete Part 2 and 3 of "Food Helpers". (worksheet attached)

Additional Resources:

Study Prints: -	"Food Helpers"	SP 301 (IMC)
Filmstrips:	"Worlds of Work"	Sunkist, 1973 (Project SNAC)
	"Foods: Where Do They Come From", Marsh Films, 1969 District IMC SFS 630	
	"Drama of Food 1: Wheat" Filmstrip House, Inc., 1971 District IMC SFS 630	
	"Foods we Eat - How We Get Bread" Singer/SVE District IMC	
Films:	"Lettuce From Field to Market"	County IMC
	"Where Does Our Meat Come From"	County IMC
	"Supermarket"	County IMC

Resource People: - School Food Service Personnel

Ask food service worker to bring a processed item to class for tasting and to describe his/her role in making food available.

"WHO AM I" - Game

When the children have become familiar with a variety of food related careers, have several students write down which food related career they would like to act out in front of class.

Select several and have students pantomine their occupation in front of class.

Have class ask questions that can be answered with "yes" or "no". Questions should begin with, "Are you a food grower? processor? transporter? seller?"

Example: Ice Cream Manufacturer.

Are you a food grower?	NO
Are you a food processor?	YES
Do you work with milk?	YES
Do you make butter?	NO
Do you make Ice Cream?	YES

NAME______________________________

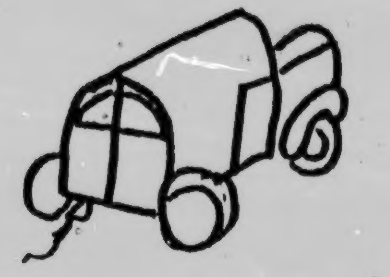
FOOD HELPERS. HOW MANY DO YOU KNOW?

SCHOOL FOOD SERVICE

RESTAURANT COOK

VEGETABLE FARMER

MOTHER



TRUCK DRIVER

DISHWASHER

WAITRESS

DADDY

CATTLE RANCHER

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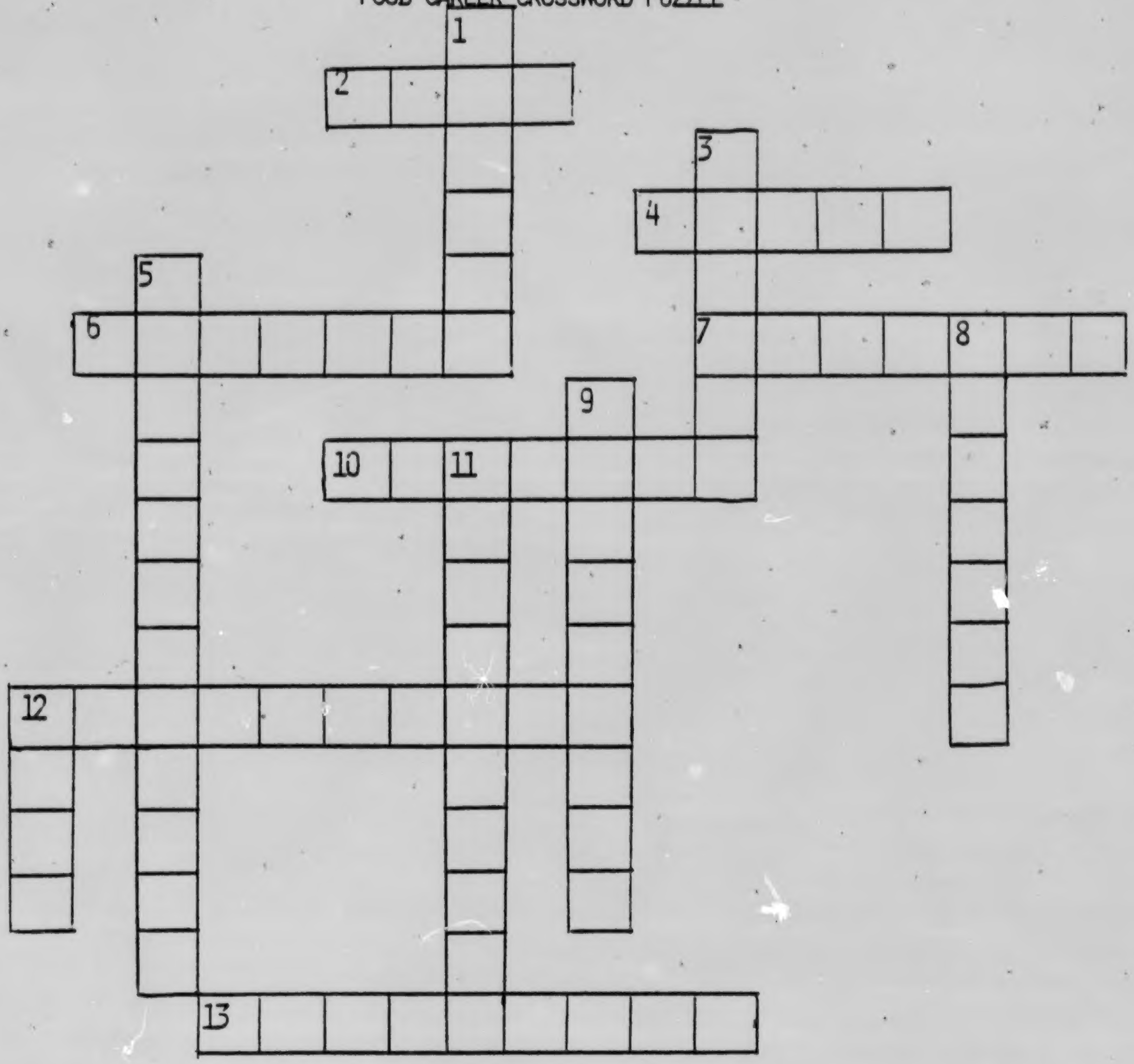
318

318/A

NAME ____________________

FOOD CAREER CROSSWORD PUZZLE



WHAT DO WE CALL THE PERSON WHO . . . .

ACROSS

2. PREPARES SCHOOL LUNCHES?
4. MAKES BREAD, CAKES, AND COOKIES?
6. CUTS MEAT AT THE GROCERY STORE?
7. BRINGS MILK TO THE STORE OR TO YOUR HOUSE?
10. COLLECTS MONEY FOR FOOD AT THE STORE?
12. FLIES A PLANE TO SPRAY THE FARMERS CROPS?
13. INVENTS NEW FOODS AND TESTS FOODS?

DOWN

1. COOKS FOOD AT HOME?
3. GROWS OUR FOOD?
5. TEACHES PEOPLE ABOUT GOOD FOOD HABITS?
8. IS IN CHARGE OF THE WHOLE GROCERY STORE?
9. CATCHES TROUT AND TUNA?
11. CHECKS RESTAURANTS TO MAKE SURE THE FOOD IS SAFE AND CLEAN?
12. COOKS FOOD IN A RESTAURANT?

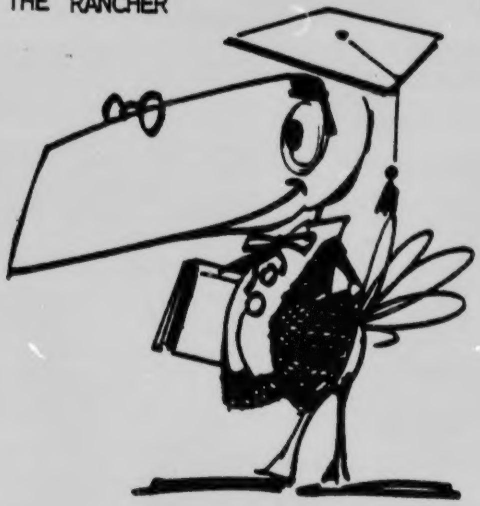
San Mateo City Schools, CA Dept. of Ed.

NAME ______________________

FOOD CAREERS MATCHING SHEET

MATCH THE PEOPLE WITH THE JOB:

1. THE FARMER	BAKES BREAD
2. THE BAKER	GROWS CATTLE, PIGS, CHICKENS
3. THE TRUCKER	GROWS FOOD
4. THE GROCER	SELLS FOOD
5. THE PROCESSOR	PACKAGES FOOD
6. THE BUTCHER	DELIVERS OUR FOOD
7. THE RANCHER	CUTS UP MEAT



San Mateo City Schools, CA Dept. of Ed.

NAME______________________

FOOD HELPERS

CORN
FLAKES

PART I -

DID YOU EVER THINK ABOUT HOW MANY PEOPLE IT TAKES TO TURN CORN INTO CORNFLAKES CEREAL FOR YOUR BREAKFAST?

WITH OTHER MEMBERS OF YOUR GROUP MAKE A LIST OF THE FOOD HELPERS NEEDED. USE THE PAPER PROVIDED.

CORN TO CORNFLAKES

____

____

____

____

____

____

____

____

San Mateo City Schools, CA Dept. of Ed.

NAME_______________

PART 2 -

LOOK AT THE STUDY PRINTS "FOOD HELPERS".

HOW DOES EACH OF THESE FOOD HELPERS HELP PROVIDE US WITH FOOD?

FOOD HELPERS	HOW THEY HELP
FOOD TRUCKER	____________________
BUTCHER	____________________
DAIRYMAN	____________________
ORCHARD PICKER	____________________
POULTRY FARMER	____________________
BAKER	____________________
FIELD WORKER	____________________
CHECKER	____________________

PART 3 -

CAN YOU NAME SOME OTHER FOOD HELPERS NOT SHOWN ON THE POSTERS?

____________________ ____________________

____________________ ____________________

____________________ ____________________

Concept D

Third Grade
Subject Areas:
Reading
Math
Health

9

LABELS, LABELS, LABELS!

Behavioral Objective: The student will identify the main ingredient in a packaged food by reading food label.

Process Objectives: Acquiring knowledge, skill in applying concepts and information.

Teacher Information: This activity gets students actively involved in learning about food package labelling. The Standard Label includes the name of the food, address and name of manufacturer, ingredients in descending order by weight, weight of food, and possibly a recipe.

Nutrition Information Per Serving is not required on all foods. Only those foods which have been fortified with nutrients or which make a health claim are required to include this information.

At the primary level the investigation and creation of a Standard Food Label will be a good inroduction to consumerism. Nutrition Information panels may be studied also. The label reading worksheet in the unit does touch on "nutrition information" panels.

Materials: One can with label removed (or a covered box)
Enlarged Standard Food Label (Project SNAC)
"Read the Label" student worksheet- 1 per student
Paper and coloring materials for student designed food labels
Optional: cans or boxes to cover with student's food labels

Vocabulary: label, contents, manufacturer, nutrition information panel

ACTIVITY

Motivation:

Show the class a food can or box with no label. Have the students try to guess what is inside the package.

Ask students to suggest information that might be on the package that would tell them more about the food. Make a list of all suggestions on the board. Save the list to compare with information actually found on food packages.

Development:

Show the enlarged STANDARD LABEL poster. Go over each of these points:

a) What kind of food is this?
b) What are the first three ingredients?
c) How can you tell which is the main ingredient? (its listed first in the ingredient list)
d) What company packaged the food?
e) What is the address of the packager?

e) How much does the food inside the package weigh?
f) Some labels have a nutrition information panel on the right hand side. Some labels have recipes, coupons, or pictures but these are not required.

2. Have each student complete a "READ THE LABEL" worksheet as homework or a class activity.

3. Have each student create a food label. Students will enjoy making a label to fit a box or can from home. Each label should include:

   Name of food
   Name of Manufacturer
   Address of Manufacturer
   Ingredients
   Weight

   Optional: Picture, recipe, coupon, offers, nutrition information panel.

   Note: if the label has a statement on it that says the food is good for you or makes any other claim about nutrient content, a nutrition information panel is required.

Evaluation:

Ask students to make a list of three items of information that are included on food labels. Compare with list suggested at start of unit.

Has each student completed a design of a label with all necessary information?

Additional Activities:

Make a bulletin board display with sample labels brought from home or designed by the students. Superimpose over the labels and flattened boxes the words "LABELS, LABELS, LABELS - WHAT DO THEY TELL US?" Add a list of important information

Have a contest to judge the most attaractive student designed label by asking which one they would choose first in the grocery store.

Nutrition Information Labels- If time and student interest allow for a more in depth look at labels, have students watch the film "Read the Label: Set a Better Table". (Available on free loan from Modern Talking Pictures, 149 New Montgomery Street, San Francisco, 94105 (415) 543-4075.

NAME ______________________

READ THE LABEL

DIRECTIONS: FIND A FOOD LABEL TO READ AND ANSWER THESE QUESTIONS ABOUT IT.

1. WHAT IS THE FOOD? ______________________
2. WHAT ARE THE INGREDIENTS? ______________________
____
____
____
3. WHAT IS THE MAIN INGREDIENT (THE ONE THERE IS MORE OF THAN ANY OTHER)?
____
4. HOW CAN YOU TELL WHAT THE MAIN INGREDIENT IS? ______________________
____
5. WHAT IS THE NAME OF THE COMPANY THAT PACKAGED THE FOOD?
____
6. HOW MUCH DOES THE FOOD INSIDE THE PACKAGE WEIGH?
____
7. DOES THE PACKAGE HAVE A "NUTRITION INFORMATION" SECTION?
____

IF NUTRITION INFORMATION IS GIVEN, ANSWER THESE QUESTIONS:

A) HOW BIG IS ONE SERVING? ______________________
B) HOW MANY CALORIES ARE IN ONE SERVING? ______________________
(CALORIES ARE THE AMOUNT OF ENERGY A FOOD HAS)
C) HOW MANY GRAMS OF PROTEIN ARE IN ONE SERVING? ______________________

READ THE WHOLE LABEL AND ASK ANY QUESTIONS YOU HAVE. THEN YOU WILL BE ABLE TO READ LABELS ON ALL FOODS.

San Mateo City Schools, CA Dept. of Ed.

Concept B

Third Grade
Subject Area:

Social Science

NORTH, SOUTH, EAST, WEST - WHICH BREAD DO YOU LIKE BEST?

Behavioral Objective: As a result of participation in a regional bread tasting activity the student will recognize the influence of regional background in food perferences.

Process Objective: Receptivity to unfamiliar experiences, mapping, differentiating, exploring alternatives, belief in the dignity and worth of others.

Teacher Information: Breads are eaten all around the world. Even regions of a country have different favorites. The type of bread found usually is based on tradition, but the major reason is the availability of specific ingredients. People in the United States move from region to region and take their favorite foods with them.

Breads and cereals provide energy. This is their most important job. They also have important B vitamins and iron.

- -

Materials: Map of U.S.
"Map of U.S." student worksheet
Taste samples of regional breads

Boston Brown Bread - New England
Corn Bread - South
Tortillas - Southwest
White Bread - Midwest

- -

Vocabulary: region, Boston Brown Bread, Corn Bread, Tortillas

ACTIVITY

Motivation:

Discuss reasons why people eat certain foods, such as Cultural Background, availability, cost, personal preference. If regional preferences are not mentioned, add it. Explain that the class will explore favorite breads of the United States.

Ask students to name their favorite bread and tell where it originally was made.

Development:

Regional Bread Tasting

On the day of the regional bread tasting activity, explain to the students that the breads are popular in certain parts of the United States. These parts of the country are called "regions". Show the whole bread to the class and name each one.

Assign students to cut the bread into bite sized pieces for the class but to leave 1 slice uncut for all to see.

Have students taste each bread. Divide the class into 5 groups and give a duplicated outline map of the United States to each group leader. Which group can correctly guess the region of the bread?

Check group answers.

Evaluation:

Written Expression: Have each student write a paragraph explaining if and how they think geography may affect food choices. Evaluate each to determine if students have grasped the concept that regional influences affect food choices.

Additional Activities:

1. Indian Fry Bread

   American Indians of the Southwest ate bread, too. One favorite is called Indian Fry Bread or Chippewa Banok. Gather ingredients and utensils. Prepare it in class. Let each student take part in preparing one serving. Send the recipe home. (attached)

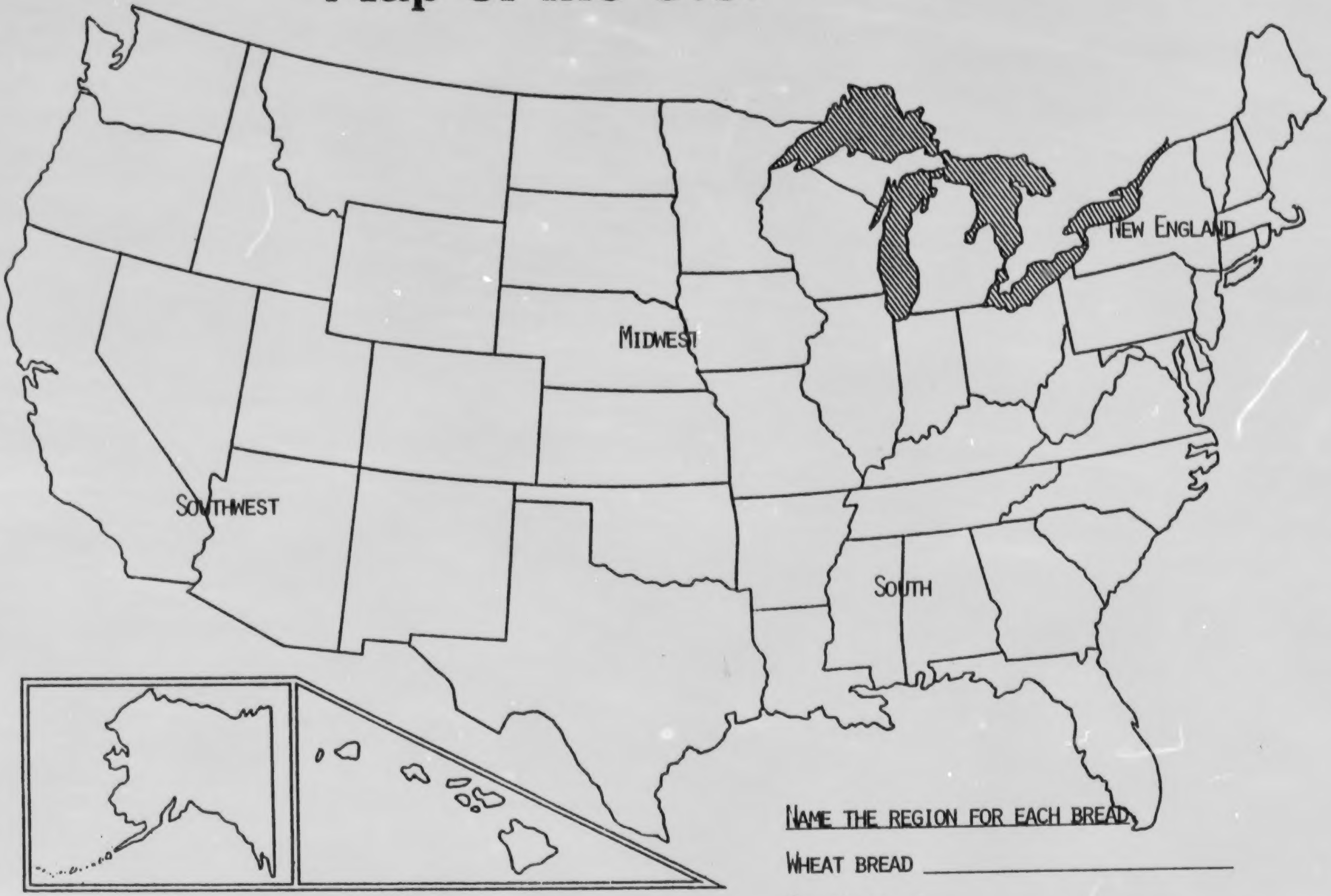
2. Ask students to bring a bread recipe or wrapper from home or cut pictures out of magazines. When collected find out how many are from other countries. Find the country on the map.
3. Have students write a paragraph about a regional favorite in their family.

Additional Resources:

1. KIDS - 50 State Cookbook - (Project SNAC)
2. Indian Fry Bread Recipe - (attached)

Map of the U.S.

Name ______________________


NEW ENGLAND
MIDWEST
SOUTHWEST
SOUTH

NAME THE REGION FOR EACH BREAD.

WHEAT BREAD ______________________

CORNBREAD ______________________

TORTILLA ______________________

BROWN BREAD ______________________

Instructor/McGraw-Hill, Paoli, Pennsylvania © 1979 by McGraw-Hill Reorder No. 2081

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INDIAN FRY BREAD

APPROXIMATELY 30 SMALL SERVINGS

4 CUPS FLOUR

2 TABLESPOONS BAKING POWDER

1-2 CUPS MILK (TO BISCUIT TEXTURE)

1 TSP. SALT

OIL - 2 TO 3 INCHES DEEP

ELECTRIC SKILLET OR DEEP FAT FRYER

*HONEY

1. MIX FLOUR, SALT, AND BAKING POWDER IN BOWL. WHEN MIXED, ADD MILK. MIX BY HAND UNTIL DOUGH IS IN A SOFT BALL.

2. HEAT OIL UNTIL HOT, BREAK A SMALL BALL OF DOUGH, AND TEST. IF THE BALL FLOATS TO THE TOP, THE OIL IS READY TO FRY BREAD.

3. BREAK IN STRIPS OR PATTIES AND FRY UNTIL GOLDEN BROWN.

*SERVE WITH HONEY IF DESIRED. INDIANS DO NOT EAT FRY BREAD WITH HONEY, HOWEVER, BECAUSE IT IS DELICIOUS AS IS.

San Mateo City Schools, CA Dept. of Ed.

Concept B

Third Grade

Subject Area:
Social Studies

FOODS AROUND THE WORLD

Behavioral Objective: Given the names of foreign lands, the child will match food names with the country.

Process Objectives: Active curiosity about the social world; belief in the dignity and worth of others; receptivity to unfamiliar experiences.

Teacher Information: As a part of social studies and multicultural education food is a natural. Food, along with shelter, clothing, transportation, and defense are the fundamental needs of man. A culture is merely a group's methods of meeting those needs. Art, music, and religion further define a culture.

The food choices a cultural group makes is influenced by agricultural conditions, economics, religion, and culture. As a result of different growing conditions, various staple items become associated with different countries. In this way rice is associated with the Orient, potatoes with the Irish, cornmeal with the Mexicans or North American Indians, and pasta with the Italians. A variety of foods and cooking methods are ethnocentric and provide each of these populations with a balanced diet.

The purpose of this unit is to expose the children to various eating preferences of several ethnic groups. The children will learn that the foods in different cultures can be combined to provide a balanced diet.

Materials: A Globe

Select One }
Filmstrip or film: See Resource List for choices
"Eating Around The World" student worksheet (see Activity #1)
Spanish words of foods from the four food groups
Utensils and ingredients for tasting and preparing
"tastes" of cultural foods (see Activity #3 & #4)

Letter to parents (Sample format)

Vocabulary: Use names of countries and foods tasted.

ACTIVITY

Motivation:

To introduce this unit, lead the following discussion:

What kinds of foods do we need to eat every day to be healthy and feel good? (Foods from the Four Food Groups)

What kind of food does a child from Germany need to stay healthy? (same as we do--foods from the Four Food Groups)

If you were living in China with a Chinese family, would you need to eat foods from the Four Food Groups? (yes)

If you were in Mexico and found the children eating only tortillas, what would you tell them to do? (to eat foods from the meat, milk, and vegetable-fruit group, too)

Development: Select one or more of the following Activities

1. Show one of the films or filmstrips listed in the Resource List. Follow with a discussion of the different kinds of people shown, what they ate, and which food groups they belonged to.

   If the filmstrip selected is "Eating Around The World", have the students complete student worksheet "Eating Around The World" page 65.

2. Taco Toss Game: The children will learn about the variety of foods common to the Mexican diet by playing TACO TOSS, using a 24" square divided into 4 sections and paper clips to throw onto the squares. Label each square with the name of one of the Four Food Groups. Children toss 4 paper clips onto the square from 6 feet away and try to get one paper clip in each food group square. The child who wins by getting all four paper clips into different squares, chooses from the hat a piece of paper with the name of a Mexican food on it and places it under the correct food group.

   Foods Found in Mexican Diet
   (Write each name on a separate card--
   English on one side, Spanish on reverse.)

Meat and Meat Substitutes	Milk Group	Bread Cereal Group	Fruits and Vegetables
meat = carne	milk = leche	bread = pan	fruit = fruta
fish = pescado	cheese = queso	flat	orange = naranja
sausage = chorizo		round	apple = manzana
dried beans = frijoles		bread = tortilla	greens = verduras
			tomato = tomate
			potato = papa

   Have the children repeat the names of the foods in English and Spanish so that the children will learn that Mexicans eat foods from the four food groups. Locate Mexico on the globe.

3. Each child will learn that in Germany many people eat cabbage in many forms because of the climate which is good for growing cabbage. After listening to the teacher tell about the cold winters in Germany and the necessity for preserving food for the cold winter months, the chuldren will eat a bite-sized portion of fresh cabbage and sauerkraut.

   Cabbage Tasting Table

   Bite-sized portions of fresh cabbage
   Small servings of sauerkraut

4. The children will learn that in China, Japan, and other Asian countries rice is the main food and that rice goes well with many other foods to make a balanced diet. The children will have an opportunity to use chopsticks, the common utensil, to learn that people eat in different ways all around the world. (Recipes next page)

Oriental Rice Preparation

Materials:	Large pan with tight fitting lid, or rice cooker Large spoon Hotplate Water Measuring cup Chopsticks Paper plates
Ingredients:	3 cups white rice (preferably short grained) 6 cups water 1 bottle soy sauce
Procedure:	Measure rice and set aside Measure water into pan and bring to a boil Stir in rice and cover tightly (add salt if desired) Reduce heat to low and simmer for 20 minutes or until all water is absorbed Serve small portions to each child with a set of chopsticks Children may add soy sauce to rice, if desired

(The children may have difficulty eating the rice with chopsticks. If so, they may scoop it up and eat it with their fingers after they have washed their hands with plenty of warm water and soap.)

While waiting for the rice to cook or while waiting for any other reason, have the children sing "Take A Trip" to the tune of "It's A Small World". (Walt Disney Productions)

TAKE A TRIP (To tune of "It's A Small World")

When I take a trip
To another land I
Have a taco here
Some cheese there
Eat some rice
Drink some milk
Pick some fruit
Eat a root
Everyone has a favorite dish
Four food groups in every land
Good foods grow in every land
Four food groups in every land
We eat the basic four.

5. Send a letter home to parents requesting their help by sharing their knowledge about food from other lands. Children will learn that these foods can be fun and are good for them.

Dear Parent(s),

In school we are learning about foods from all around the world. We are inviting our parents to visit our classroom to share a recipe from a foreign country. There are _____ children in my class and we would enjoy watching you prepare a new food for a class snack.

If you are interested, please write or call my teacher, and let him/her know. We are studying foods from __________.

Evaluation: Based on foods and countries covered in the unit, ask the children to name foods from the countries studied. Also ask the children to write the names of the food groups that boys and girls all over the world should eat to stay healthy and to feel good. (all Four Food Groups)

Additional Activities: Borrow filmstrip "Eating Around The World" (Additional Resources) and have students complete the attached student worksheet.

1. Arrange a walking tour of a nearby Chinese or Japanese restaurant to give the children an opportunity to observe the decorations, serving utensils, and different ways foods are cooked.

2. Prepare Guacomole, a favorite dip popular in Mexico and the southwest region of the U.S. It is made with a fruit called "avocado".

    2 large ripe avocados
    1 tomato, diced
    ½ tsp. salt
    pepper to taste
    dash of garlic powder or salt
    Hot sauce
    Tortilla chips or crackers

    Cut avocado in half. Remove seed. Scrape soft pulp out of the shell with a spoon. Add the tomato, salt, pepper, garlic salt, dash of hot sauce (optional). Mix together well. Do not let guacomole sit out uncovered for more than a few minutes or it will turn brown. Serve with crackers or chips.

3. Italian Pasta Collage: By making a collage with many different shapes of pasta from Italy, the children will learn that one type of food may have a variety of forms. To gather a variety of pasta shapes, ask children to bring a small amount to class of any shape noodles they have at home.

Additional Resources:

Film: "The Big Dinner Table" available from Modern Talking Pictures on free loan or for rental from the San Mateo County Instructional Materials Library #0697.

Families all over the world show how nutrition comes from the "Four Food Groups".

Filmstrips: "Eating Around The World" from You Are What You Eat, ACI Productions, Inc., 1975. (available from the District IMC SFS 641.1)

Children tour the world of food through imagination--Chinatown, German, Jewish, American.

"Old Friends: New Foods" from Nutrition: Food, Fuel, Energy, Q-Ed Productions, 1976. (available from Project SNAC).

Illustrates ways food is prepared in many cultures and emphasizes the importance of tasting new foods.

Books:	Mexicali Soup by Hitte, Kathryn and W. D. Hayes, Parents' Magazine Press, New York. (Available from Project SNAC). A rhythmic prose book that tells about a Mexican-American family that expects "Mama's" delicious Mexicali soup and gets an unexpected dish.
Cookbooks:	Eating and Cooking Around The World, by Berry, E., John Day Co., New York, 1963. (School library) Many Hands Cooking, International Cookbook for Boys and Girls by T. Cooper and N. Ratner, Thomas Y. Crowell Co., New York, 1974. U. S. Committee for UNICEF.
Teacher Reference:	Cultural Awareness For Young Children by E. McNeill, et al, Learning Tree, Dallas, 1975. A collection of delightful activities and games for many cultural groups--eskimos to cowboys.

NAME ______________________________

EATING AROUND THE WORLD

WATCH THE SOUND FILMSTRIP "EATING AROUND THE WORLD" TO FIND THESE ANSWERS.

1. NAME ONE FOOD THAT WE EAT THAT CAME FROM CHINA.

____

WHAT FOOD GROUP IS IT IN? ______________________________

2. WHAT POPULAR FOOD CAME FROM ITALY? ______________________________

WHAT FOOD GROUP IS IT IN? ______________________________

3. NAME 2 FOODS THAT CAME TO US FROM GERMANY. ______________________________

AND ______________________________

WHAT FOOD GROUPS ARE THEY IN? ______________________________

4. NAME A FOOD THAT CAME TO US FROM MEXICO. ______________________________

WHAT FOOD GROUP IS IT IN? ______________________________

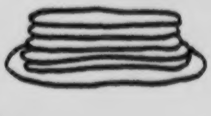
5. IF YOU WERE ABLE TO "EAT AROUND THE WORLD," WHAT FOOD WOULD YOU EAT FIRST?

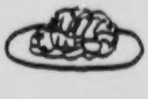
____

WHAT FOOD GROUP IS IT IN? ______________________________

WHAT FOOD WOULD YOU EAT SECOND? ______________________________

WHAT FOOD GROUP IS IT IN? ______________________________





San Mateo City Schools, CA Dept. of Ed.

Concept E

__ENRICHMENT__

Third Grade
Subject Area: Health Science

12

PRESERVING FOODS: WHY AND HOW

__Behavioral Objective:__ The student will name two methods of food preservation and state one or more reasons food is preserved.

__Process Objectives:__ Differentiating; skill in engaging in the process of observing, inferring, and valuing, predicting consequences, explaining, cause and effect.

__Teacher Information:__ Food is preserved so that it can be stored without refrigeration. Food safety is very important to health. Bacteria do not grow in very cold, dry, salty, sweet, acid, or alkaline environments. Therefore, food preservation utilizes one or more of these methods.

Preservation Methods
- Freezing
- Drying
- Canning
- Salting
- Sugar (jams, jellies)
- Pickling

Reasons for food preservation

- Food safety
- To save food for later safely
- To reduce weight for shipping
- To increase variety
- To reduce preparation time

Using frozen and dried foods as examples with which all children are familiar, the concept of food processing and preservation can be introduced. Activities in which students are involved in freezing or drying foods reinforce the understanding of food preservation. (See Additional Information on page 70.)

__Materials:__ __Dried Foods__

Food dehydrator (Project SNAC) or make your own (see page 69)
Fresh carrots, beans, peas, golden delicious apples, mushrooms, green pepper (select number desired)
Saran Wrap

__Frozen Foods__

Box or bag of frozen fruit or vegetable
16 mm film: __Frozen Foods__ (Project SNAC)
Fresh carrots, peas, corn or green beans
vegetable peeler
paring knife

337

Materials: (cont'd.)

Frozen Foods (cont'd.)

cutting board
bowl
2 quart saucepan
hot plate
plastic containers with tight lids or plastic baggies with ties.

Vocabulary: dry, freeze, frozen, thawed, preserve, pickle, smoke, blanch

ACTIVITY

Motivation:

1. Bring some fresh milk, meat, or leafy vegetables to class. Leave it out uncovered for two or three days. Discuss what is happening to the food and ask students to suggest possible ways of preserving food so it will last for many months or years without spoiling.
2. Watch "Frozen Foods" film (Project SNAC)

Development:

1. Frozen Foods
   Prepare and freeze a food in class. Vegetables work well, especially carrots and fresh peas.
   To prepare food for freezing:
   1. Wash, peel, and cut into bite size pieces, if necessary.
   2. Drop fresh vegetables into boiling water for 1 minute to blance the food. This kills any enzymes which may cause discoloration or spoilage during storage.
   3. Drain well and store in air-tight plastic containers.
   4. Freeze immediately. Freezer should be between 0-10°F. Food will freeze at 32° F or lower. Fast freezing is best for safety and quality.
   5. Cook and serve the vegetable at a later date. Compare some fresh samples to the frozen food. Which is faster to prepare and cook?

2. Dried Foods
   a) Obtain or construct a food dryer for classroom use. Collect selected fruits and vegetables for the drying process.
   b) Before drying foods, solicit class list of adjectives to describe the color, small, and texture of the fresh foods.
   c) To prepare food for drying.
      Small groups of students cut thin slices of fruits and

Dried Foods (cont'd.)

vegetables for drying. Cover drying pan with clear plastic wrap. Lay food in a single layer on the pan. Have students predict what will happen after several hours when the warm light is on. Check food periodically. When dry compare to the fresh. Make enough to save some in a plastic bag. Rehydrate by soaking after several weeks. Compare to fresh.

d) Reconstitute dried milk. Compare taste, color, smell with fresh milk.

Evaluation:

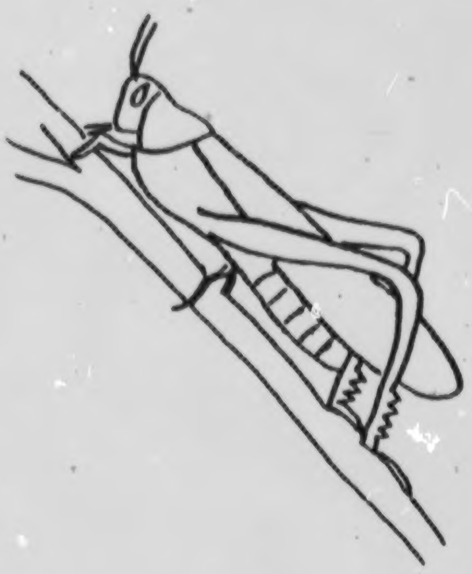
Ask students to name two ways food can be preserved and two reasons for preserving foods. Acceptable answers include:

(Food Preservation methods: Dry, freeze, can, pickle, salt, smoke, freeze-dry, sugared.)

(Reasons: To use surplus food, for variety, to speed preparation time, to reduce weight for shipping.)

Additional Activities:

1. **Pickled Foods**
   Compare and taste fresh cucumber slices and pickles. Where should they be stored? Refrigerator or cupboard? Why?
2. **Smoked Foods**
   Find out how the Eskimoes and Indians smoke their meat to preserve it. Taste smoked fish or meat.
3. **Canned Foods**
   Compare fresh and canned foods of any type.
4. For several days have each child keep a list of all foods eaten at home that are preserved. Compare lists. Which foods are available in winter that would not be available without preserving them? (Summer fruits and vegetables)
5. Tour the supermarket to see the kinds of foods in the freezer section. What kinds of fruits and vegetables are available frozed that are not in the fresh produce section?
6. Dry sliced or small fruits and vegetables in the sun, warm, dry place, or slow oven (95-100° F) until completely dry. Pasteurize by heating at 175° F for 10-15 minutes to discourage insect eggs and mold.
7. Dry green beans by stringing fresh beans with a needle and thread. Hang to dry in a warm, shady spot. This will take about a week. Rehydrate later and compare to fresh.



GRASSHOPPERS EAT EVERY KIND OF CROP PLANT OR GARDEN VEGETABLE.

IN A FEW HOURS A LARGE SWARM OF GRASSHOPPERS CAN DESTROY A

WHOLE CROP OF CORN. GRASSHOPPERS ARE INSECT ENEMIES.

A HOMEMADE FOOD DRIER

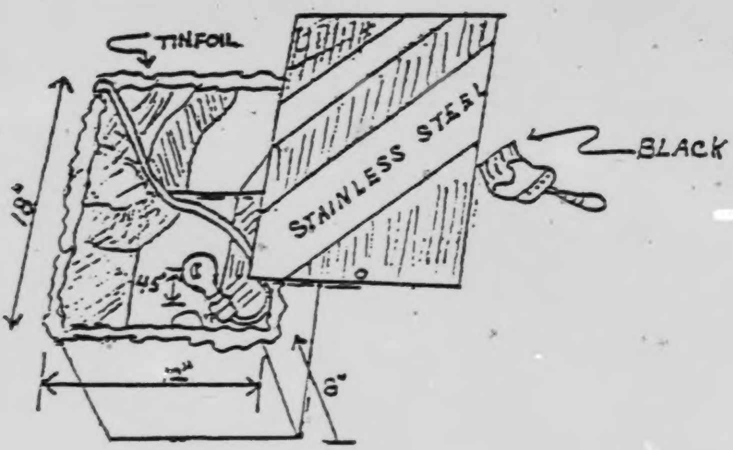
Drying is one of the oldest methods of preserving fruits and vegetables. If you want to dry only small batches of food at a time, try putting together this simple, inexpensive drier, designed by the Rodale Research and Development Group.

You'll need a topless cardboard or wooden box measuring roughly 1 by 1½ feet; and at least 8 inches in depth, a stainless steel sheet (or cookie sheet) sized to fit over the box, one or more 60-watt bulbs with socket bases and cords, tinfoil, and a few brushfuls of black paint.

First paint the bottom of the metal sheet black for maximum heat absorption. Line the box with tinfoil, shiny side up. Place the bulb setup in the center of the box, angling it at 45° from the horizontal. (For larger driers, add a bulb for every 2 to 3 square feet of added area.) After notching a top corner of the box to admit the cord, place the tray over the box (Black side down), making sure that bulb is a few inches distant from the tray. Finally, plug in the bulb.

Coat the tray with a thin layer of vegetable oil to keep sliced fruit and vegetables from sticking. Herbs may be efficiently dried, too. Count on roughly 12 hours' drying time—less for herbs and finely cut foods. Peas, beans and corn should be very hard. To preserve the nutritional value of fruits, it's best not to remove the peel.

Pasteurize dried food to discourage insect eggs and molding in storage; 10 to 15 minutes in a 175° F. oven should do it. Then, let the food sit in open jars for several days, turning it occasionally to promote a uniform dryness. For long-term storage, use airtight, sterilized glass jars or plastic bags.

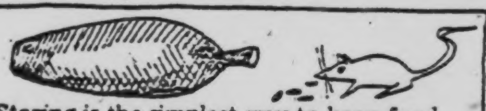


ADDITIONAL INFORMATION FOR TEACHERS

Fight, Win, Feast

There are many ways to preserve foods but they all do basically the same thing. They make life difficult for the competition by making the food inaccessible (canning), indigestible (pickling), or inhospitable (freezing). The point is to keep foodstuff in a state your competition can't tolerate.

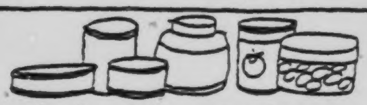
Food for Keeps



Storing is the simplest way to keep food, although the food is fair game for animals large and small. This is a rice jar. It has a tiny neck to allow rice to be poured in and out, but it keeps out critters larger than a grain of rice.

Pickling creates an environment too acid for most organisms to tolerate. Often vegetables are steeped in a vinegar solution. Sugar is added for sweet pickles.

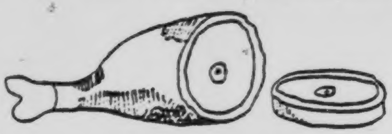
Drying is a very old way of preserving food. Removing the moisture makes life difficult for most molds, bacteria, and insects. It also makes storage and transport easy because the loss of water shrinks the food, making it smaller and lighter.



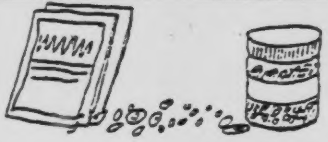
Canning is a rather recent invention. Nicolas Appert worked out the method in 1809 to keep Napoleon's armies alive. Food is put into a sealed container, heated to kill all the microorganisms, and left closed and sterile until used.

Smoking was perhaps an outgrowth of drying discovered by someone who wanted to hurry up the sun drying process. The smoke is soaked up by food tissue, making it toxic to microorganisms.

Freezing. Most organisms can exist only within a very limited temperature range. Freezing excludes most organisms that might eat a meal before you do. Eskimos have used this method for a long time. Folks in the middle latitudes now preserve food in ice boxes and refrigerators.



Salting was used by sailors to preserve food. Sometimes food is soaked in a solution of salt and vinegar. This solution is called brine. Remember "the briny deep?"



Freeze drying is the latest food preservation method. A combination of freezing food and exposing it to a vacuum makes this a most effective drying method.

Concept E

ENRICHMENT

Third Grade
Subject Area:
Science

INSECT FRIENDS AND ENEMIES

Behavioral Objective: The student will identify one insect that is helpful and one insect that is harmful to our food.

Process Objective: Making observations; inferences, value judgements; grouping; identifying common properties; extrapolating.

Teacher Information: Man has waged a battle with insects over food since time began. In this unit, students will apply previous knowledge about insects, will acquire new information about insects structure and feeding habits, and will learn how insects help or hurt man's food supply.

This lesson is most valuable when done in conjunction with or following the study of plants we eat.

- -

Materials:

Insect Friends and Enemies - booklet (attached)

"Insects - Friends or Enemies?" student worksheet

Library books on insects (Library)

Recommended: Study prints "Insects of garden and Cropland" (District IMC)

- -

Vocabulary: insect, crops, helpful, harmful, friend, enemy

ACTIVITY

Motivation: - (Choose 1)

1. Show a suggested filmstrip on insects and their development. (see Additional Resources list)
2. Bring to class a fruit, vegetable, or grain product that has been damaged by insects or worms.
3. Show a picture of an insect contaminated food.

Discussion questions:

Why is the insect (worm) there?
What is an insect? Is a worm an insect? (It will be)
What do insects eat?
How do farmers protect their crops from insects?
Are all insects harmful?
How do insects help us grow food?
How can you tell a spider from an insect?

Development:

1. Have each student read the booklet Insect Friends and Enemies and complete the worksheet, "Insects - Friends or Enemies?"
2. Take a tour of the school yard to collect insects and spiders. Back in class count legs to determine if the creature is an insect (six legs) or a spider (eight legs). Caterpillars have six legs but you have to look very closely to see them.
3. Have students write a short story about a real or imaginary experience they have had with insects in or on their food, and how they solved the problem.

Evaluation:

Ask the students to write the names of one insect harmful to our food, and one that is helpful.

Additional Activities:

1. SCIS Kit Aphid Growth Activity
2. Select additional appropriate filmstrip from resource list.
3. Have students select library books about insects and prepare a book report.

Additional Resources Available from District IMC:

FS	632.75	Insects that Destroy Plant	(P,M Color)
FS	648.7	Housefly and Its Relatives	(P,M)
FS	648.7	Household pests	(P.)
FS	595.7	Honey Bee	
RK	595.7	Honeybees	
SFS	638.1	Honey Power	
SFS	595.7	Insects (Filmstrip House)	

Additional Resources from Project SNAC:

Books: My Ladybug

Mounts of Beneficial Insects

Mounts of Harmful Insects

Filmstrip: "Insect Friends and Enemies"

Insect Friends and Insect Enemies

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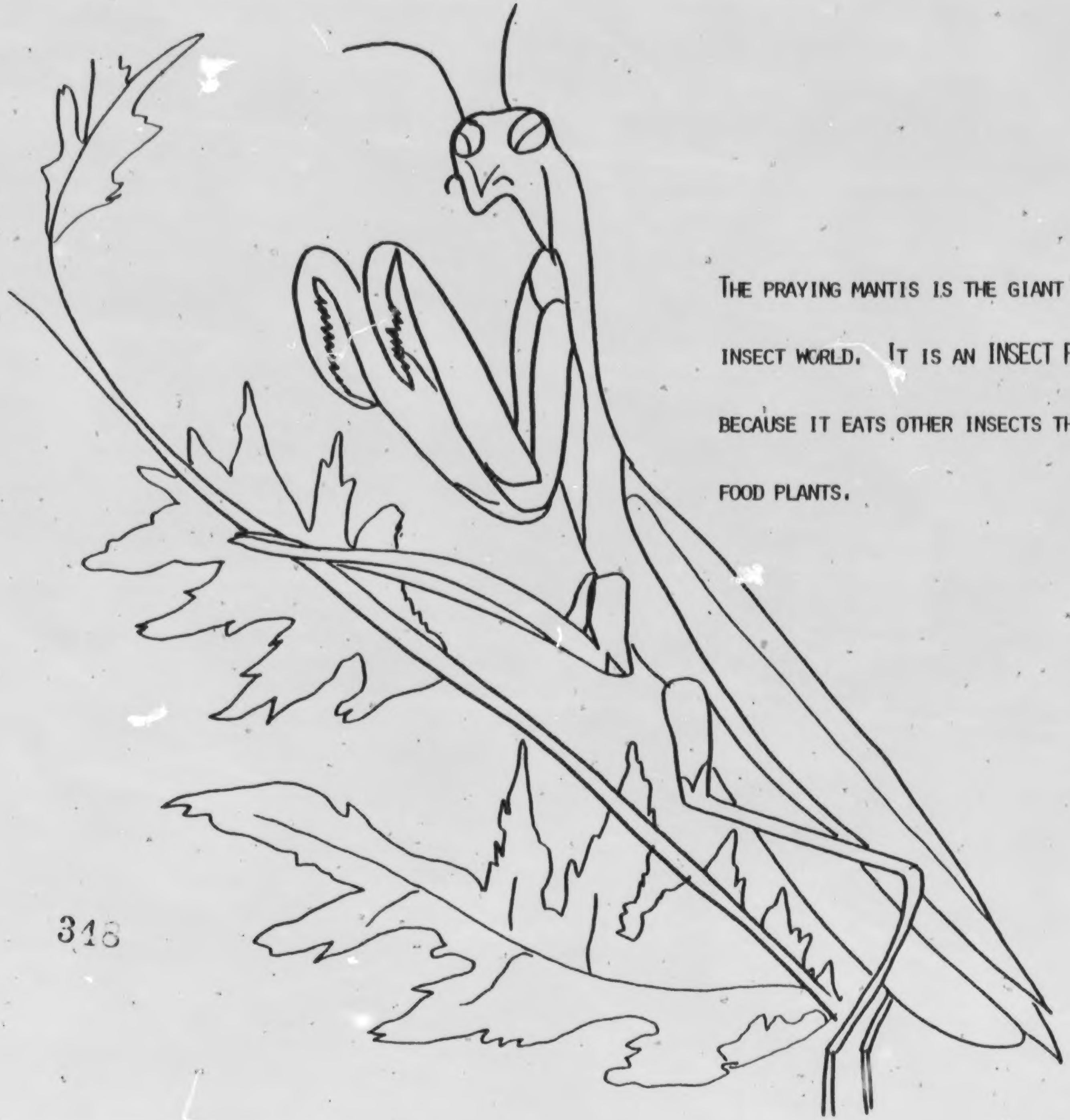
There are many kinds of insects. They are found all over the world.

Insects have six legs. Many insects can fly because they have wings.

Bees, butterflies, flies, grasshoppers, ants, ladybugs, beetles, crickets, aphids, and mosquitoes are insects we can see.

Some insects eat our food while it is growing in the garden. Farmers do not like this. The insects who eat our food are INSECT PESTS.

Some insects help us. Insects that help us are our INSECT FRIENDS. Bees make honey. Ladybugs eat aphids. He have other insect friends, too.



THE PRAYING MANTIS IS THE GIANT OF THE INSECT WORLD. IT IS AN INSECT FRIEND BECAUSE IT EATS OTHER INSECTS THAT EAT FOOD PLANTS.

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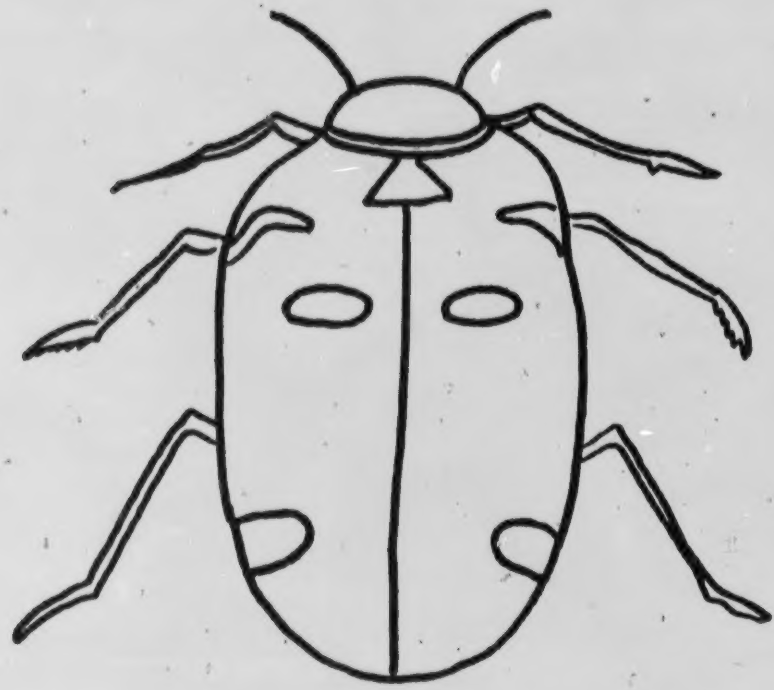

THE LADYBUG IS ORANGE. LADYBUGS EAT INSECTS THAT HURT AND EAT PLANTS. IT IS AN INSECT FRIEND.

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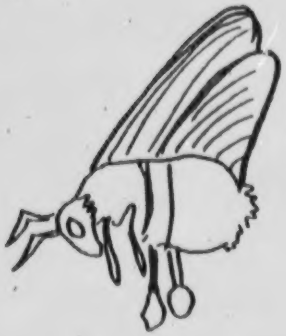

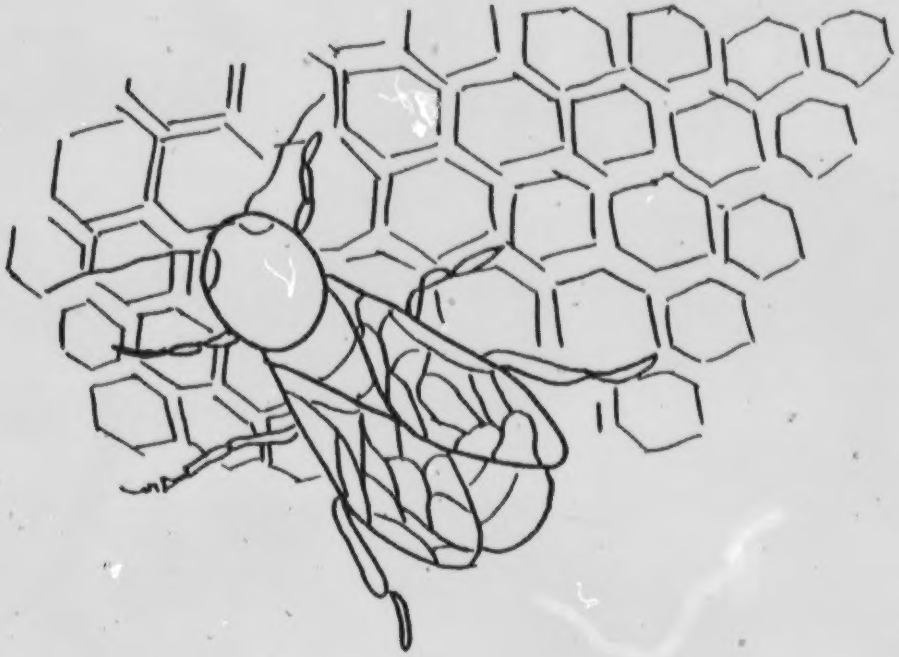

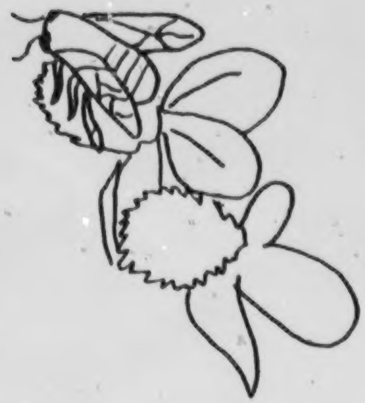

HONEYBEES HELP CROPS GROW. BEES CARRY POLLEN FROM ONE PLANT FLOWER TO ANOTHER ON THEIR LEGS.

HONEYBEES MAKE SWEET HONEY. BEES ARE INSECT FRIENDS.

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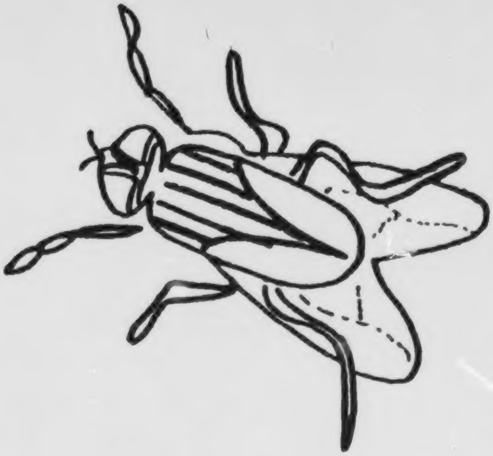

HOUSEFLY

THE HOUSEFLY COMES NEAR OUR FOOD. IT CARRIES GERMS.

HOUSEFLIES ARE INSECT ENEMIES.

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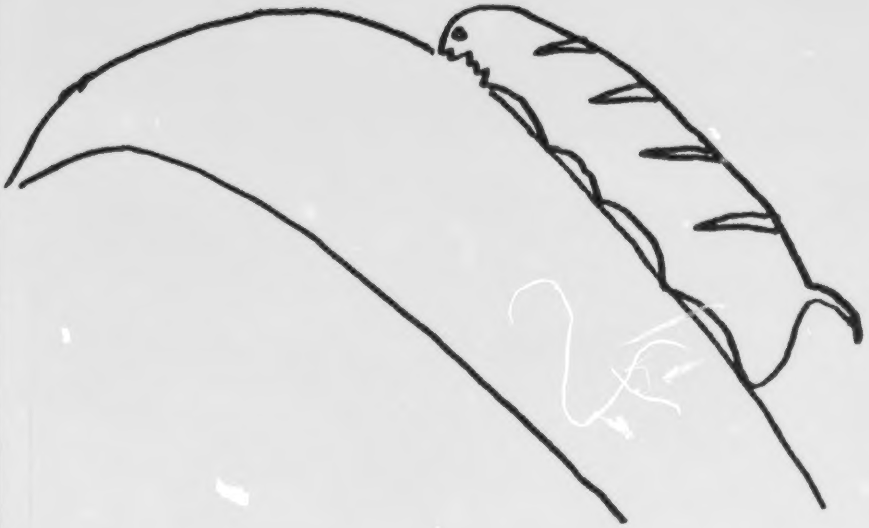
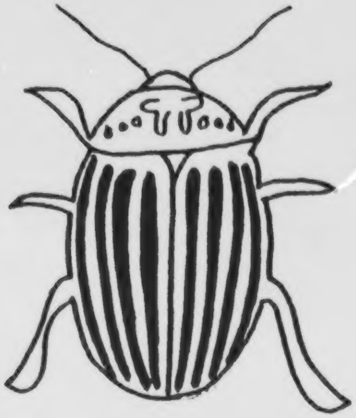


Tomato Hornworm

The tomato hornworm eats the leaves of tomato plants. The plant cannot grow. The tomato hornworm is an INSECT ENEMY.

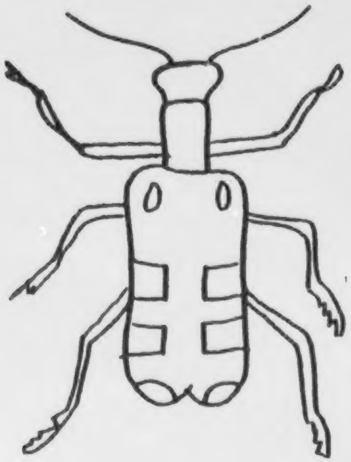


POTATO BEETLES

EAT POTATO PLANTS

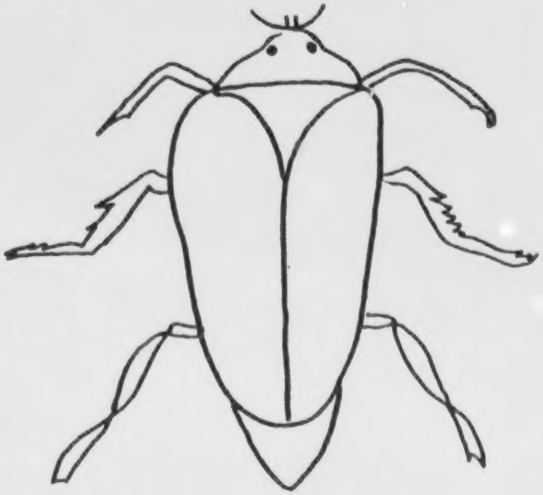
THESE ARE

INSECT ENEMIES



ASPARAGUS BEETLE

EAT ASPARAGUS PLANTS



JAPANESE BEETLE

EAT MANY PLANTS

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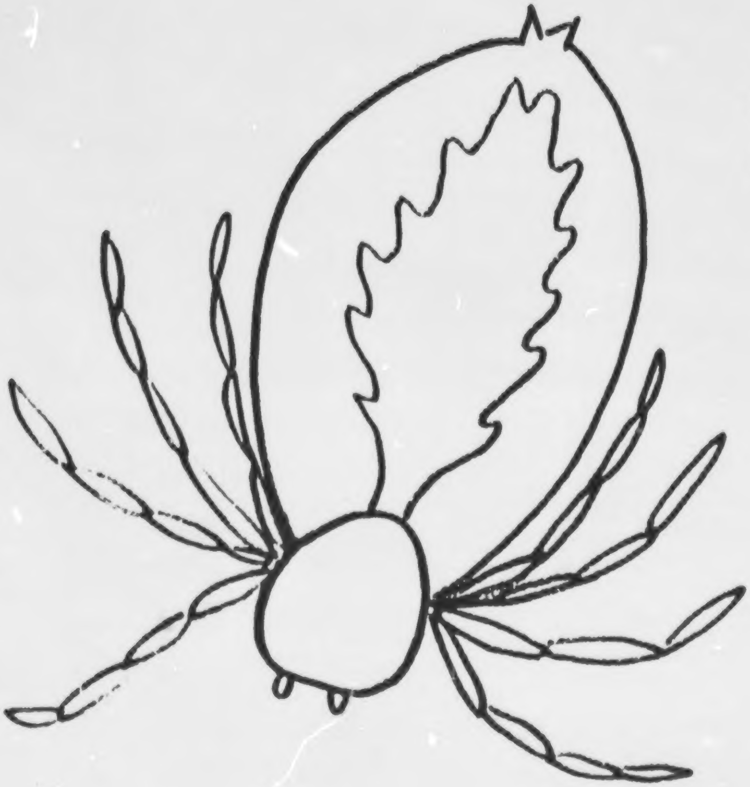

SPIDERS ARE
OUR FRIENDS.

SPIDERS HAVE EIGHT LEGS AND TWO BODY PARTS. INSECTS HAVE SIX LEGS AND THREE BODY PARTS. ALL SPIDERS SPIN WEBS WITH THEIR SPINNERETTES. SPIDERS EAT INSECTS THAT EAT OUR FOOD. SPIDERS ARE FRIENDS.

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NAME________________________________

INSECTS
FRIENDS OR ENEMIES?

READ THE BOOKLET INSECT FRIENDS AND INSECT ENEMIES TO ANSWER THESE QUESTIONS.

1. HOW CAN YOU TELL A SPIDER FROM AN INSECT BY ITS LEGS?

2. CAN YOU NAME 2 INSECT FRIENDS?

3. WHAT INSECT FRIEND MAKES A SWEET FOOD?

4. NAME 3 INSECT ENEMIES THAT EAT FOOD WHILE IT IS GROWING.

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Concepts B, D

ENRICHMENT

Third Grade
Subject Area:
Social Studies

A CLOSE LOOK AT FOOD ADS

Behavioral Objective: The student will use guidelines to identify food advertisement techniques used on television and magazines.

Process Objectives: Ability to stand vigorous analysis and learn from it; understanding of the factors that affect social behavior; ability to see alternative points of view and their rationale.

Teacher Information: Food manufacturers use many techniques in their television commercials. These include using celebrities, cartoons, prize offers, catchy phrases, songs, slogans, humor and occasionally nutrient information. Magazine ads tend to use similar techniques in addition to coupon offers. The young child often cannot tell fact from fantasy. Therefore as consumers they will be helped to make rational food choices if they can "see through commercials".

- -

Materials: Mission Possible Worksheets #1 and #2

- -

Vocabulary: ad, advertisement, commercial, product, advertiser, slogan, coupon, gimmick

ACTIVITY

Motivation:

Introduce the terms "ad" and "commercial". Both are messages that try to sell people certain products. Advertisers want people to buy their products (food, toys, cars) and they use special methods to persuade people that their product is better than others.

Ask students to describe some ads they have seen on television.

Development:

Mission Possible No. 1:

Assign a homework assignment of watching T.V. at home to evaluate commercials. Saturday morning is the best time. On the day following the homework assignment, talk about the ads the children saw in light of the film or filmstrip viewed. To show the types of foods that are advertised on T.V. make a list of all the ads the children report having seen and count the number of foods from each of the Four Food Groups and extras. Also count the number of sweetened foods, imitation foods. The discussion can lead to the topic of whether or not foods advertised on television are healthy. Why or why not?

Mission Possible No. 2:

Select ads from magazines and newspaper for students to use in completing Mission Possible No. 2. Discuss gimmicks used in magazines.

Evaluation:

Display three different types of advertisements. Ask the children to identify at least two techniques used in each ad.

Additional Activities:

Art:

Make a bulletin board of collected ads entitled "Ads: Believe It or Not!" Include ads the children think use "tricks" to sell the product.

Drama:

Have groups develop one or two original T.V. Commercials in skit form considering what would make other classmates buy the product.

Field Trip:

Tour the Supermarket. Prior to the tour, describe the general layout of the store. The outside shelves are used to stock basics - produce, dairy, meat, bread. The center aisles are used for less basic foods. As a class or for individual or group project, have the students count the rows of candy, soda, chips and other extras. What kind of foods are at the end of the aisles, near the door, near the check out counter? What kinds of foods offer prizes?

Additional Resources:

A) Film - Seeing Through Commercials - available through
#4713 (rental) County IMC

B) Filmstrips - "Catch a Commercial" from Alice in Consumer Land.
District IMC: SFS 640.73 set

C) "The Commercial" from You, The Consumer District IMC
SFS 640.73

NAME ______________________________

MISSION POSSIBLE #1

DIRECTIONS: TAKE THIS PAPER HOME AND FILL IN THE BLANKS.

1. WATCH TELEVISION FOR ONE HOUR.
2. COUNT THE FOOD COMMERCIALS AND LISTEN CAREFULLY TO WHAT THEY TELL YOU.
3. COMPLETE THIS PAGE AND BRING IT BACK TO SCHOOL.

QUESTIONS:

1. HOW MANY FOODS WERE ADVERTISED IN TELEVISION IN ONE HOUR? ________________

2. NAME THE FOODS THAT WERE SHOWN ON THE COMMERCIALS.

____________________	____________________	____________________
____________________	____________________	____________________
____________________	____________________	____________________

3. HOW MANY OF THE FOODS WOULD YOU SAY ARE SWEET TASTING? ____________________

4. TELL WHAT YOU LIKED ABOUT THE COMMERCIALS. ______________________________

____

5. WHAT ARE SOME THINGS YOU DIDN'T LIKE ABOUT THE COMMERCIALS? ______________

____

6. DO YOU THINK A FOOD IS GOOD FOR YOU IF YOU SEE IT ON TELEVISION?

____

WHY? ____

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NAME ______________________________

MISSION POSSIBLE #2

YOUR MISSION IS TO BECOME A MAGAZINE ADVERTISEMENT DETECTIVE. READ MAGAZINES TO FIND FOOD ADVERTISEMENTS. COLLECT AS MANY AS YOU CAN THAT USE THE "GIMMICKS" LISTED BELOW.

1. SOME FOOD ADVERTISEMENTS USE SPECIAL WORDS TO SELL THE FOOD. FIND ADVERTISEMENTS THAT HAVE WORDS LIKE THESE:

NEW
BEST
FREE
CRUNCHY
SAVE MONEY
LOW CALORIE
FORTIFIED
VITAMINS
DELICIOUS
FUN

2. SOME FOOD ADVERTISEMENTS SHOW CERTAIN PEOPLE TO MAKE YOU LIKE THE FOOD. FIND ADVERTISEMENTS THAT SHOW PEOPLE LIKE THESE:

HAPPY PEOPLE
ATHLETES
CARTOON PEOPLE
CHILDREN

3. SOME FOOD ADVERTISEMENTS HAVE SPECIAL OFFERS. FIND ADVERTISEMENTS THAT OFFER THESE THINGS:

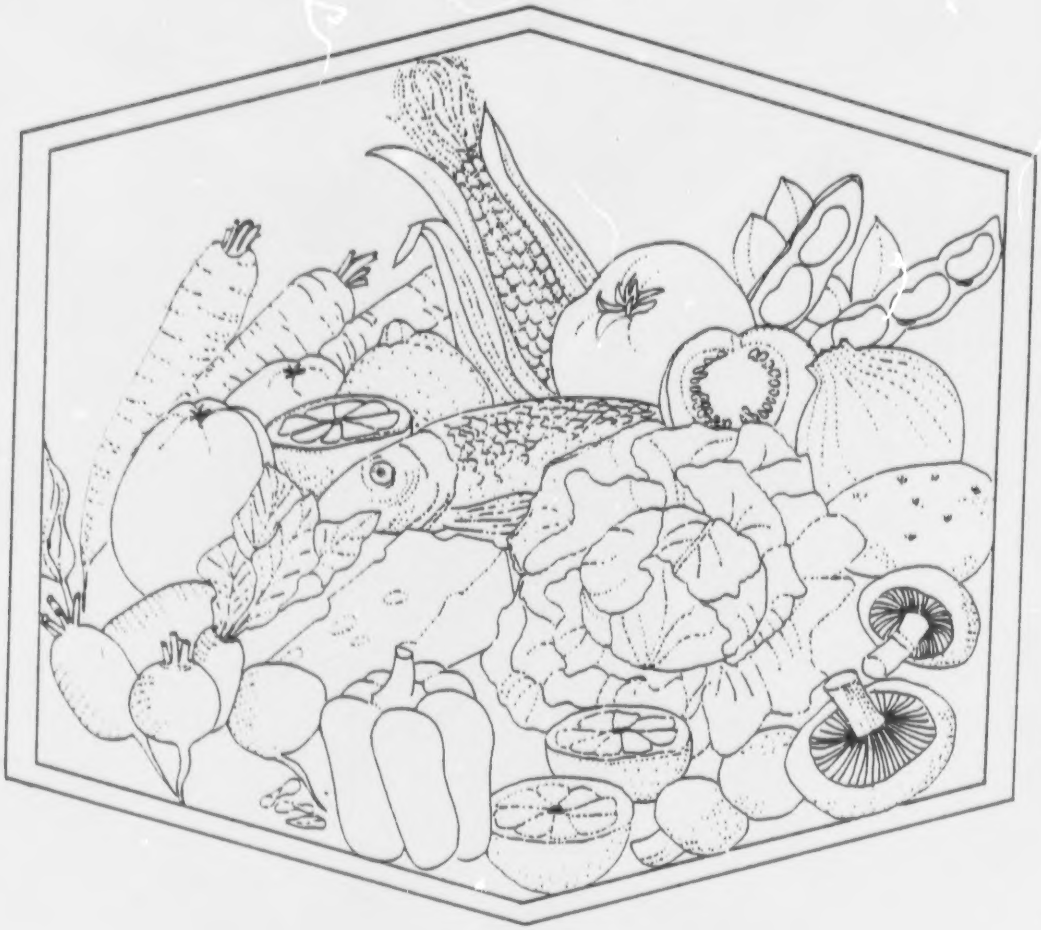
FREE PRIZE INSIDE
PRIZES TO SEND FOR
TOYS
COUPONS
RECIPES AND COOKBOOKS

4. TRY TO FIND ONE MAGAZINE ADVERTISEMENT FOR A FOOD OR FOR A DRINK THAT DOES NOT USE SPECIAL WORDS, SPECIAL OFFERS, OR PEOPLE TO SELL THE PRODUCT. GOOD LUCK! IF YOU FIND ONE, WRITE THE NAME OF THE FOOD OR DRINK HERE.

____

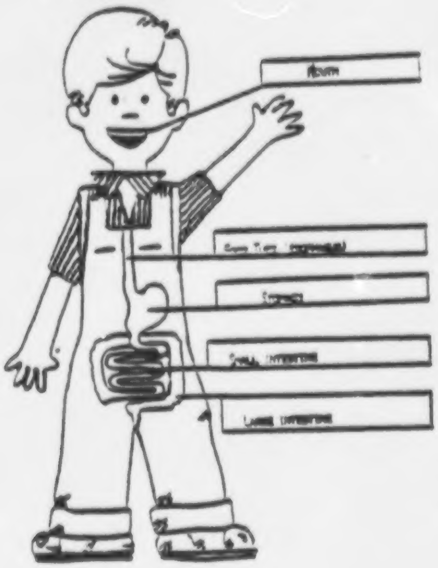
WORKSHEET ANSWER KEYS

Answer keys for the worksheets in the previous lessons have been reduced in size and arranged four to a page in sequential order. Each answer has the same title and page number as the original worksheet used in the lesson.



Name ___Answer Key___

Digestive System



Name ___Answer Key___

Who Am I?

Digestive System Riddles

Directions: Choose from these words to finish the riddles:

Stomach	Mouth	Small Intestine
Saliva	Large Intestine	Food Tube

I am where you chew your food. I am your ___Mouth___

I am a juice that mixes with food in your mouth. I help dissolve food.

I am ___Saliva___

I am what food goes through when it leaves your mouth. I am your

___Food___ ___Tube___

I am where food goes when you swallow it. The food mixes with juices as it is churned around. I am your

___Stomach___

I am a long tube. Food is digested in this tube. I am almost 20 feet long. I am your

___Small___ ___Intestine___

I am the big tube where leftover food stays until it is passed out of the body. I am your

___Large___ ___Intestine___

Name ___Answer Key___

What's My Menu

Directions: Write down everything you eat and drink for one whole day. Be sure to write all your snacks and drinks, too. Save your list.

This is what I ate in the morning for breakfast:

Answers will vary according to what students ate.

This is what I ate for lunch:

This is what I ate after school:

This is what I ate for dinner:

Name ___Answer Key___

Planning a 3-2-4-4 Day

For Health, Growth, and Energy, EVERYDAY should be a 3-2-4-4 DAY!!

Directions:

1. Plan a 3-2-4-4 day using foods you like.
2. When you have written a menu, trade it with a classmate and tell how your foods add up to 3-2-4-4.

Breakfast

Answers will vary

Lunch

Dinner

Snacks

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NAME ANSWER KEY

HOW MANY SERVINGS

CIRCLE THE CORRECT ANSWER:

HOW MANY SERVINGS FROM THE BREAD/CEREAL GROUP SHOULD YOU GET EACH DAY?

5 [✓ 4] 2 3

HOW MANY SERVINGS FROM THE MILK GROUP SHOULD YOU GET EACH DAY?

[✓ 3] 1 2 5

HOW MANY SERVINGS FROM THE MEAT GROUP SHOULD YOU GET EACH DAY?

4 3 [✓ 2] 1

HOW MANY SERVINGS SHOULD YOU GET FROM THE VEGETABLE-FRUIT GROUP EACH DAY?

5 [✓ 4] 2 3

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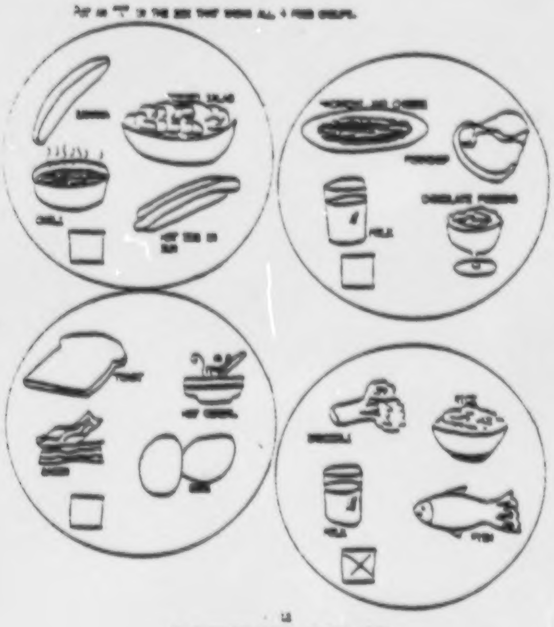
NAME ANSWER KEY

"X" MARKS THE SPOT

PUT AN "X" IN THE BOX THAT SHOWS ALL 4 FOOD GROUPS.


BANANA
TOSSED SALAD
CHILI
HOT DOG IN BUN
MACARONI AND CHEESE
POPCORN
MILK
CHOCOLATE PUDDING
TOAST
HOT CEREAL
BACON
EGGS
BROCCOLI
MILK
FISH

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NAME ANSWER KEY

WHAT'S BEST FOR ME?

CIRCLE THE FOODS THAT CAN CAUSE TOOTH DECAY:

[✓ MARSHMALLOW]
APPLE
CARROT
[✓ [illegible]]
[✓ JELLY DONUT]
[✓ ROOT BEER]
MILK
[✓ POPSICLE]
[✓ COOKIE]
FRUIT SALAD

FAT OR SKINNY.

1. PEOPLE WHO DO NOT HAVE ENOUGH TO EAT GET VERY ___SKINNY___. (FAT, [✓ SKINNY])
2. PEOPLE WHO EAT TOO MUCH FOOD USUALLY GET ___FAT___. (SKINNY, [✓ FAT])
3. PEOPLE WHO NEED TO LOSE WEIGHT SHOULD EAT ___LESS FOOD___ ([✓ LESS FOOD], MORE FOOD).
4. PEOPLE WHO ARE SKINNY NEED TO EAT ___MORE FOOD___. (LESS FOOD, [✓ MORE FOOD])

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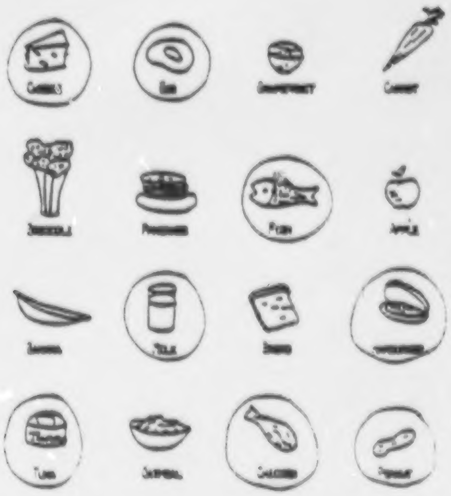
NAME ANSWER KEY

PROTEIN FOR MAKING ME GROW

CIRCLE THE PROTEIN-RICH FOODS.


CHEESE
EGG
GRAPEFRUIT
CARROT
BROCCOLI
PANCAKES
FISH
APPLE
BANANA
MILK
BREAD
HAMBURGER
TUNA
OATMEAL
CHICKEN
PEANUT

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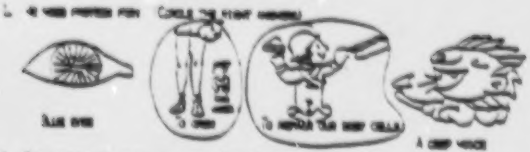
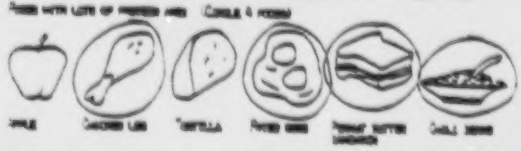
NAME ANSWER KEY

PROTEIN FUN SHEET

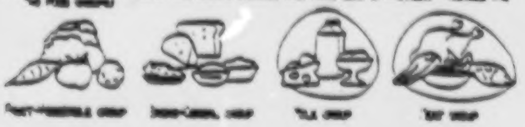
1. WE NEED PROTEIN FOR: (CIRCLE THE RIGHT ANSWERS)



2. FOODS WITH LOTS OF PROTEIN ARE: (CIRCLE 4 FOODS)



3. I GET FOOD FROM THESE 2 FOOD GROUPS BECAUSE THEY HAVE LOTS OF PROTEIN. (CIRCLE THE TWO FOOD GROUPS)



NAME ANSWER KEY

DO YOU KNOW ABOUT CALCIUM?

CHOOSE FROM THESE WORDS TO FILL IN THE BLANK SPACES:

THREE	MINERAL
LEAFY GREENS	TEETH
MILK	CHEESE

1. CALCIUM IS A MINERAL THAT HELPS ME HAVE STRONG BONES AND TEETH

2. THE MILK I DRINK HAS LOTS OF CALCIUM IN IT.

3. ANOTHER FOOD THAT GIVES ME CALCIUM IS LEAFY GREENS

4. BOYS AND GIRLS MY AGE SHOULD HAVE AT LEAST THREE SERVINGS FROM THE MILK GROUP EVERY DAY.

5. A FOOD MADE FROM MILK THAT IS FULL OF CALCIUM IS CHEESE

NAME ANSWER KEY

MILK FOODS PUZZLE

DIRECTIONS: READ THE CLUE. FIND THE ANSWER IN THE WORD LIST. SOME WORDS ARE NOT USED. PUT ONE LETTER IN EACH BOX.

CLUES

CHOOSE FROM THIS WORD LIST

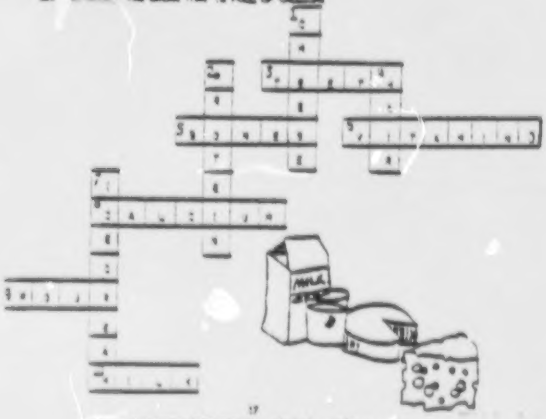
DOWN

1. A FOOD IN THE MILK GROUP USED IN SANDWICHES.
2. THIS NUTRIENT MAKES YOUR MUSCLES STRONG.
4. THE VITAMIN A IN MILK HELPS YOU HAVE GLOSSY, SHINY [illegible]
7. A FROZEN TREAT MADE WITH MILK.

ACROSS

3. CALCIUM IN MILK HELPS BUILD STRONG _ _ _ _ _ TO HELP YOU CHEW YOUR FOOD.
5. CALCIUM HELPS BUILD STRONG, STRAIGHT _ _ _ _ _ TO HELP YOU STAND UP STRAIGHT.
6. THIS NUTRIENT IS ADDED TO MILK. YOU ALSO GET IT FROM SUNSHINE IN THE SUMMER.
8. MILK IS MOST FAMOUS FOR THIS MINERAL.
9. HOW MANY SERVINGS DO YOU NEED FROM THE MILK GROUP EVERY DAY?
10. SOMETHING YOU DRINK THAT IS FULL OF CALCIUM.

CHEESE
[illegible]
[illegible]
[illegible]
CALCIUM
ICE CREAM
PROTEIN
[illegible]
[illegible]
MILK
TEETH
VITAMIN D



NAME ANSWER KEY

VITAMINS

AFTER YOU WATCH THE FILMSTRIP "YOU ARE WHAT YOU EAT" ANSWER AS MANY OF THESE QUESTIONS AS YOU CAN.

1. CIRCLE THE LETTERS THAT ARE THE "NAMES" OF VITAMINS.

   ⓐ [illegible] [illegible] ⓒ F ⓓ [illegible] ⓑ ⓔ

   DID YOU CIRCLE FIVE LETTERS?

2. MATCH THE FOOD TO HOW ITS VITAMINS HELP YOUR BODY STAY HEALTHY.

   HEALTHY GUMS — VITAMIN C
   HEALTHY EYES — VITAMIN A
   HEALTHY NERVES — VITAMIN B FAMILY
   HEALTHY BONES — VITAMIN D

3. WRITE THE NAME OF A FOOD THAT IS FULL OF THESE VITAMINS:

   VITAMIN A SPINACH, CARROTS, SQUASH, EGGS
   VITAMIN B MEAT, BREAD, CEREAL
   VITAMIN C CITRUS FRUITS, BROCCOLI, STRAWBERRIES, TOMATOES
   VITAMIN D MILK, CHEESE

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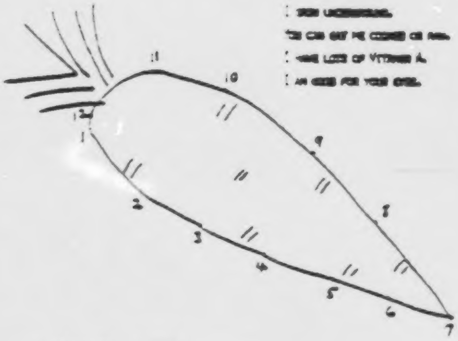
NAME ANSWER KEY

I AM A VEGETABLE



I AM A VEGETABLE.
I GROW UNDERGROUND.
YOU CAN EAT ME COOKED OR RAW.
I HAVE LOTS OF VITAMIN A.
I AM GOOD FOR YOUR EYES.

WHAT AM I? CARROT

DRAW A VEGETABLE YOU EAT.

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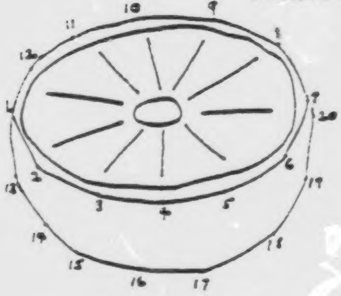
NAME ANSWER KEY

CUT ME IN HALF

CUT ME IN HALF AND EAT ME WITH A SPOON.
I AM YELLOW.
I HAVE LOTS OF VITAMIN C.



VITAMIN C IS GOOD FOR YOUR GUMS AND SKIN. IT HELPS HEAL CUTS, TOO.

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NAME ANSWER KEY

VITAMINS ADDED TO MILK

1. CAN YOU FIND THE NAMES OF THE VITAMINS THAT ARE ADDED TO THIS MILK? WHAT ARE THEIR NAMES?

VITAMIN D

VITAMIN A

DO YOU KNOW HOW THESE VITAMINS HELP YOU STAY HEALTHY?

[illegible]

2. WRITE THE NAME OF THE VITAMIN THAT HELPS YOU HAVE HEALTHY EYES.

A

3. WHICH VITAMIN HELPS YOUR BONES STAY STRONG?

[illegible]

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NAME ANSWER KEY

WHERE SHOULD THESE FOODS BE STORED?

TO MAKE SURE FOOD IS SAFE TO EAT IT SHOULD BE STORED IN THE RIGHT PLACE. DO YOU KNOW WHERE THESE FOODS SHOULD BE KEPT?

DIRECTIONS

WRITE "R" IN FRONT OF EACH FOOD THAT SHOULD BE KEPT IN THE REFRIGERATOR.
WRITE "F" IF THE FOOD SHOULD BE PUT IN THE FREEZER.
WRITE "C" IF THE FOOD CAN BE STORED SAFELY IN THE CUPBOARD.

1. R CARTON OF MILK
2. C [illegible]
3. C CEREAL
4. R MEAT
5. R LETTUCE
6. R BUTTER
7. R EGGS
8. R HOT DOGS
9. F FROZEN CORN
10. C [illegible]
11. C [illegible]
12. F ICE CREAM
13. C RAISINS
14. R APPLES
15. C SALT
16. F T.V. DINNERS
17. C CANNED PEACHES
18. C JELLY

REFRIGERATOR

FREEZER

CUPBOARD

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Name Answer Key

Meet the Food Spoilers

	True or False
Food spoilers need food.	T
Food spoilers live in very cold places.	F
Food spoilers in milk will die if they are boiled.	T
Food spoilers cannot live without water.	T
Food spoilers can live in dried food.	F
Food spoilers are called microbes.	T
Milk should be left on the counter overnight.	F
It is important to wash your hands before you eat.	T

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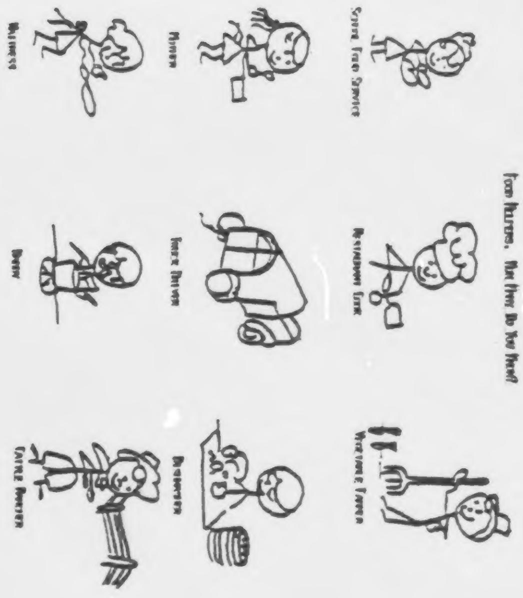
Name Answer Key

These are all food helpers -
Ask students to name as many as they can

Food Helpers. How Many Do You Know?



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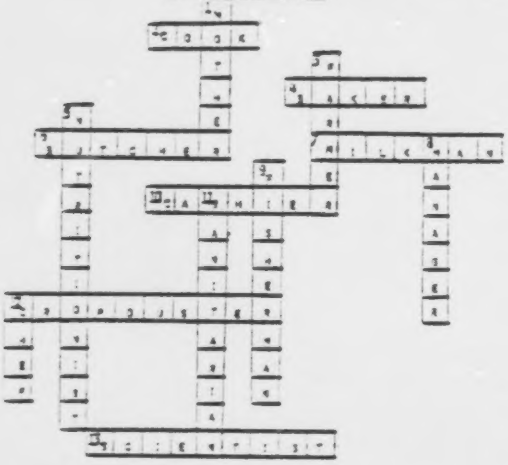
Name Answer Key

Food Career Crossword Puzzle



What do we call the person who . . . .

Across
2. Prepares school lunches?
4. Makes bread, cakes, and cookies?
6. Cuts meat at the grocery store?
7. Brings milk to the store or to your house?
11. Collects money for food at the store?
12. Flies a plane to spray the farmer's crops?
13. Invents new foods and tests foods?

Down
1. Cooks food at home?
3. Grows our food?
5. Teaches people about good food habits?
8. Is in charge of the whole grocery store?
9. Catches trout and tuna?
10. Checks restaurants to make sure the food is safe and clean?
12. Cooks food in a restaurant?

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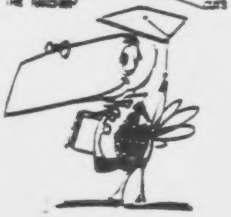
Name Answer Key

Food Careers Matching Game

Match the people with the jobs

1. The farmer — grows food
2. The baker — bakes bread
3. The trucker — delivers our food
4. The grocer — sells food
5. The processor — packages food
6. The butcher — cuts up meat
7. The rancher — grows cattle, pigs, chickens



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Name Answer Key

Food Helpers

Part 1 -

Did you ever think about how many people it takes to turn corn into cornflakes cereal for your breakfast?

With other members of your group make a list of the food helpers needed. Use the paper provided.

Corn to Cornflakes

Farmer

Corn picker

Trucker

Cornflake manufacturer

Packager

Grocer

Consumer

Name Answer Key

Part 2 -

Look at the study prints "Food Helpers". SP 311

How does each of these food helpers help provide us with food?

Food Helpers	How They Help
Food Trucker	Delivers milk to the creamery
Butcher	Trims and prepares our meat
Dairyman	Milks cows for our milk
Orchard Picker	Picks apples
Poultry Farmer	Inspects our chickens and eggs
Baker	Bakes and prepares cakes
Field Worker	Picks our crops
Checker	Bags our food to be taken home

Part 3 -

Can you name some other food helpers not shown on the posters?

Cattle rancher
Fisher
Cook or chef

School food service
Vegetable farmer
Dish washer

Name Answer Key

Read the Label

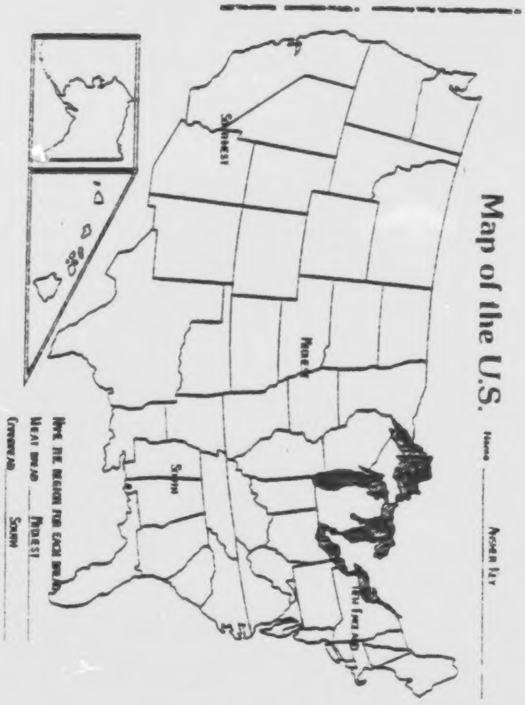
Directions: Find a food label, to read and answer these questions about it.
Answers will vary with label -
an example using canned corn

1. What is the food? Corn
2. What are the ingredients? Corn, water, sugar, salt and starch
3. What is the main ingredient (the one there is more of than any other)? Corn
4. How can you tell what the main ingredient is? The first ingredient listed
5. What is the name of the company that packaged the food? [illegible]
6. How much does the food inside the package weigh? 17 oz (1 lb. 1 oz.)
7. Does the package have a "Nutrition Information" section? Yes

If nutrition information is given, answer these questions:

a) How big is one serving? 1 cup
b) How many calories are in one serving? 220
Calories are the amount of energy a food has
c) How many grams of protein are in one serving? 5

Read the whole label, and ask any questions you have. Then you will be able to read labels of all foods.



Name the region for each bread:
Wheat bread Midwest
Cornbread South
Tortilla Southwest
Brown bread New England

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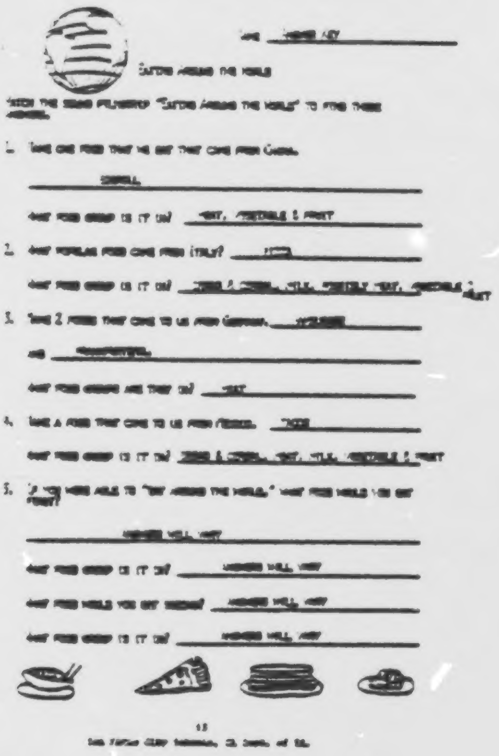
NAME ANSWER KEY

EATING AROUND THE WORLD

WATCH THE SOUND FILMSTRIP "EATING AROUND THE WORLD" TO FIND THESE ANSWERS.

1. NAME ONE FOOD THAT WE EAT THAT CAME FROM CHINA.
EGG ROLL
WHAT FOOD GROUP IS IT IN? MEAT, VEGETABLE & FRUIT
2. WHAT POPULAR FOOD CAME FROM ITALY? PIZZA
WHAT FOOD GROUP IS IT IN? BREAD & CEREAL, MILK, POSSIBLY MEAT, VEGETABLE & FRUIT
3. NAME 2 FOODS THAT CAME TO US FROM GERMANY. WIENERS
AND HAMBURGERS
WHAT FOOD GROUPS ARE THEY IN? MEAT
4. NAME A FOOD THAT CAME TO US FROM MEXICO. TACO
WHAT FOOD GROUP IS IT IN? BREAD & CEREAL, MEAT, MILK, VEGETABLE & FRUIT
5. IF YOU WERE ABLE TO "EAT AROUND THE WORLD," WHAT FOOD WOULD YOU EAT FIRST?
ANSWERS WILL VARY
WHAT FOOD GROUP IS IT IN? ANSWERS WILL VARY
WHAT FOOD WOULD YOU EAT SECOND? ANSWERS WILL VARY
WHAT FOOD GROUP IS IT IN? ANSWERS WILL VARY

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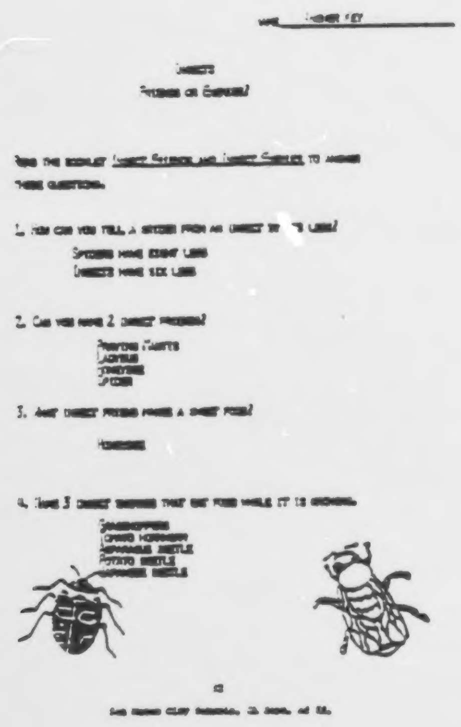
NAME ANSWER KEY

INSECTS
FRIENDS OR ENEMIES?

READ THE BOOKLET INSECT FRIENDS AND INSECT ENEMIES TO ANSWER THESE QUESTIONS.

1. HOW CAN YOU TELL A SPIDER FROM AN INSECT BY ITS LEGS?
SPIDERS HAVE EIGHT LEGS
INSECTS HAVE SIX LEGS
2. CAN YOU NAME 2 INSECT FRIENDS?
PRAYING MANTIS
LADYBUG
HONEYBEE
SPIDER
3. WHAT INSECT FRIEND MAKES A SWEET FOOD?
HONEYBEE
4. NAME 3 INSECT ENEMIES THAT EAT FOOD WHILE IT IS GROWING.
GRASSHOPPERS
TOMATO HORNWORM
ASPARAGUS BEETLE
POTATO BEETLE
JAPANESE BEETLE

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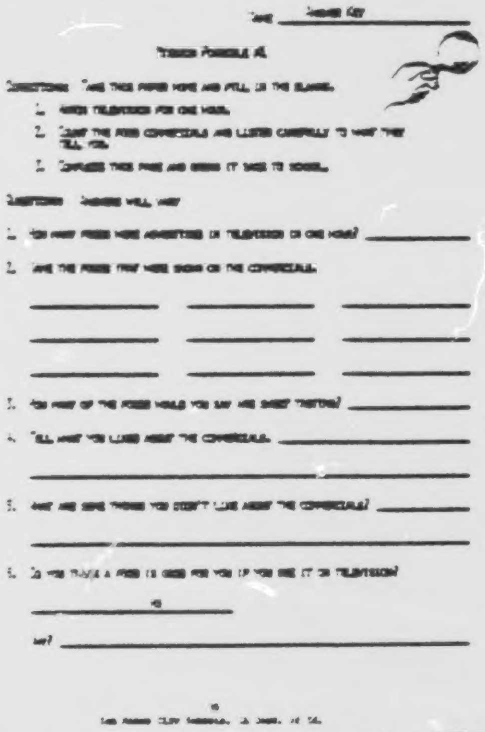
NAME ANSWER KEY

MISSION POSSIBLE #1

DIRECTIONS: TAKE THIS PAPER HOME AND FILL IN THE BLANKS.
1. WATCH TELEVISION FOR ONE HOUR.
2. COUNT THE FOOD COMMERCIALS AND LISTEN CAREFULLY TO WHAT THEY TELL YOU.
3. COMPLETE THIS PAGE AND BRING IT BACK TO SCHOOL.

QUESTIONS: ANSWERS WILL VARY

1. HOW MANY FOODS WERE ADVERTISED ON TELEVISION IN ONE HOUR? ____________
2. NAME THE FOODS THAT WERE SHOWN ON THE COMMERCIALS.

____________ ____________ ____________
____________ ____________ ____________
____________ ____________ ____________

3. HOW MANY OF THE FOODS WOULD YOU SAY ARE SWEET TASTING? ____________
4. TELL WHAT YOU LIKED ABOUT THE COMMERCIALS. ____________
5. WHAT ARE SOME THINGS YOU DIDN'T LIKE ABOUT THE COMMERCIALS? ____________
6. DO YOU THINK A FOOD IS GOOD FOR YOU IF YOU SEE IT ON TELEVISION?
NO
WHY? ____________

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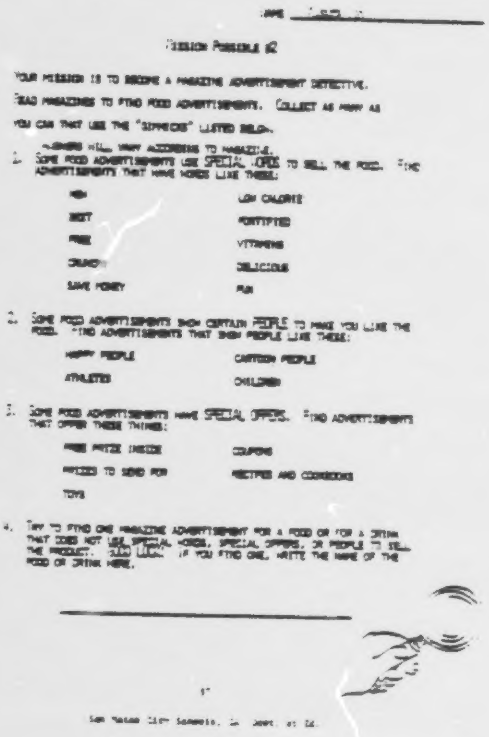
NAME ANSWER KEY

MISSION POSSIBLE #2

YOUR MISSION IS TO BECOME A MAGAZINE ADVERTISEMENT DETECTIVE. READ MAGAZINES TO FIND FOOD ADVERTISEMENTS. COLLECT AS MANY AS YOU CAN THAT USE THE "GIMMICKS" LISTED BELOW.

ANSWERS WILL VARY ACCORDING TO MAGAZINE.

1. SOME FOOD ADVERTISEMENTS USE SPECIAL WORDS TO SELL THE FOOD. FIND ADVERTISEMENTS THAT HAVE WORDS LIKE THESE:
NEW
BEST
FREE
CRUNCHY
SAVE MONEY
LOW CALORIE
FORTIFIED
VITAMINS
DELICIOUS
FUN
2. SOME FOOD ADVERTISEMENTS SHOW CERTAIN PEOPLE TO MAKE YOU LIKE THE FOOD. FIND ADVERTISEMENTS THAT SHOW PEOPLE LIKE THESE:
HAPPY PEOPLE
ATHLETES
CARTOON PEOPLE
CHILDREN
3. SOME FOOD ADVERTISEMENTS HAVE SPECIAL OFFERS. FIND ADVERTISEMENTS THAT OFFER THESE THINGS:
FREE PRIZE INSIDE
PRIZES TO SEND FOR
TOYS
COUPONS
RECIPES AND COOKBOOKS
4. TRY TO FIND ONE MAGAZINE ADVERTISEMENT FOR A FOOD OR FOR A DRINK THAT DOES NOT USE SPECIAL WORDS, SPECIAL OFFERS, OR PEOPLE TO SELL THE PRODUCT. GOOD LUCK! IF YOU FIND ONE, WRITE THE NAME OF THE FOOD OR DRINK HERE.

____

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SNAC

San Mateo Nutrition Activity Curriculum

"Swing Into Nutrition"

SAN MATEO CITY SCHOOL DISTRICT
50 Peninsula Avenue
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San Mateo, California 94402

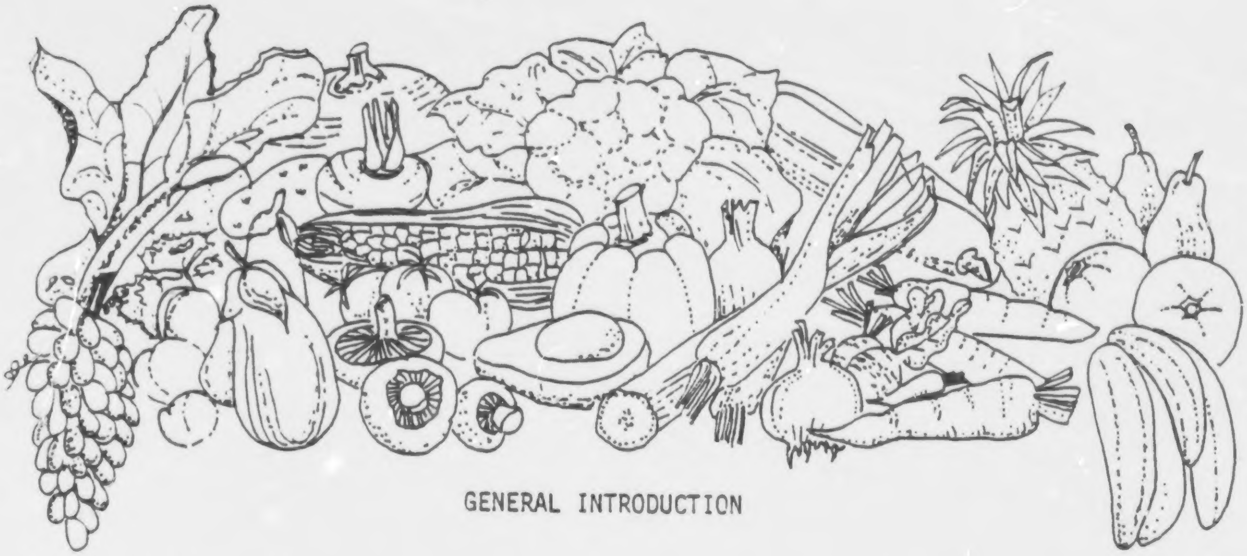
PS 011893

Dr. Julian Crocker, Superintendent
Dr. Lillian Wehmeyer, Assistant Superintendent

Miss Deborah Barley
Nutrition Education Specialist
Project Director

Funded 1976-80 By California State Department of Education
1975 Child Nutrition Facilities Act

January 1980
San Mateo City School District



GENERAL INTRODUCTION

Nutrition Education starts with you! The San Mateo City School District has designed a program in the elementary grades to integrate nutrition education into the general curriculum.

The goal of this program is to prepare elementary grade students to develop and improve healthful food habits. By the time the student leaves the elementary school, he/she should understand the relationship between food habits and well-being; should express concern that his/her food choices promote well-being; should demonstrate a willingness to taste new foods; and should be prepared to make informed decisions regarding his/her food choices. To achieve these purposes, the program focuses on the theme:

"SWING INTO NUTRITION!"

The program needs and encourages active support and involvement of students, parents, and staff members of a multicultural population. The program is based on five concepts:

(A) Food Choices and Health

(B) Factors influencing Food Choices

(C) Food Related Careers

(D) Consumer Competencies

(E) Food Safety and Sanitation

It is a multi-disciplinary curriculum in which cognitive and effective objectives in all subject areas including language arts, science, health, social studies, and math are integrated with nutrition concepts and synthesized with appropriate process goals (teaching and instructional methods). These process goals have three sources: the person, society, and the disciplines.

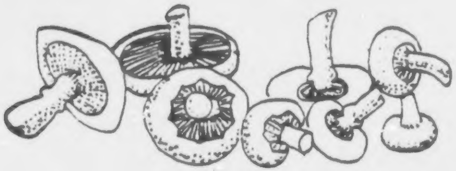
Each lesson contains directions which include behavioral and process objectives, a concept focus which is indicated by a letter in the upper left-hand corner, teacher information, materials needed or suggested, specific directions for motivation and activities, evaluation or pupil performance, and additional resources and activities. Cooking and food preparation activities are occasionally suggested. To supplement these activities, a wide collection of cookbooks and recipes are available in the Project Resource Library.

The lessons are numbered in sequence, but the teacher may rearrange the lessons to suit classroom needs and schedule. In addition to these lessons, there are ENRICHMENT lessons at the end of each Curriculum Guide to reinforce previous lessons.

All of the lessons and activities mentioned in this Curriculum Guide have been designed, tested, evaluated and articulated by Project teachers and nutritionists. They have proven effective for all participants.

Remember: The nutrition activities involving children are not only educational but fun. So join us and ......

"SWING INTO NUTRITION!"



ACKNOWLEDGEMENTS

Many, many people have helped and contributed valuable time in the development, teaching, and evaluation of the San Mateo Nutrition Education Project. The Nutrition Education Staff in San Mateo City School District wishes to acknowledge and thank these persons for their special achievements.

Food Service Director	Carvill Veech (Project Director 1976-79)
Nutrition Education Aide	Lenore Hicks
The Board of Education	Donald Hill Sue Lempert Albert Di Matteo Robert Braun Jeanne Schlueter
All Project K-5 Teachers	Laurel School North Shoreview School
Project Principals	Warren Kofler Charles Moorer
Graphic Artists	Brooke Travers William Kirk David Moore

AND

School Food Service staff members, parents, school nurses, the Project Evaluator Howard Wolff, Ph.D., Special Curriculum Consultant Anna Nuernberger, and Nutrition Education secretarial staff, especially Althea Jocz and Barbara Harris.

SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

(SNAC)

"SWING INTO NUTRITION!"

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Worksheet Answer Keys . . . . 109 - 119

SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

CURRICULUM GUIDE

Fourth Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
1	Nutrition Search 4-Part Unit	To define nutrition and calories, explore the six major nutrient classes; state bodies nutrient needs and name the four food groups.	A	Health Science	1
	"Nutrition Search" *Booklet containing*		A	Health Science	5
	Cells	To illustrate a body cell.			
	Energy Nutrients	To identify functions and food sources of these nutrients.	A	Health Science	6
	Vitamin Alphabet Chart		A	Health Science	7
	Minerals		A	Health Science	8
	Water		A	Health Science	9
	"Tests For Nutrients" *Information Sheet*	To describe the method.for testing foods for nutrients.	A	Science	10
	"Who Am I?" *Worksheet (riddles)*	To identify nutrients, protein, carbohydrates, fat and calories.	A	Science Health	11
	"Protein For Making Us Grow." *Worksheet (circling)*	To identify protein-rich foods.	A	Health	12
	"Protein Fun Sheet" *Worksheet (circling)*	To select correct fact about protein.	A	Health	13
	"Water Word Hunt" *Worksheet puzzle*	To identify foods and drinks high in water content.	A	Health	14
	"How Much Have You Learned?" *Worksheet (fill-in)*	To evaluate what the student has learned through the Nutrition Search lesson.	A	Health	15
	"Nutrient Toss" *Game*	To practice matching foods with major nutrients and their functions.	A	Health	16

CURRICULUM GUIDE

Fourth Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
	"What Can The Right Foods Do For You?" *Worksheet (fill-in)*	To reinforce knowledge of energy nutrients.	A	Health	20
	"Food Science" *At home activity*	To test for nutrients in foods.	A	Science	22
	"Food Games" *Worksheet (matching)*	To match nutrients and food groups with food sources.	A	Health	24
	"Catch A Nutrient" *Worksheet (circling)*	To reinforce the six major nutrients; protein, fat, carbohydrates, vitamins, minerals and water needed by the body.	A	Health	25
2	How Much Is Enough?	To identify factors that determine the amount of food and nutrients needed by the body.	A	Health	26
	"Recommended Dietary Allowances 1980" *Information sheet*	To give daily requirements of important nutrients for maintenance of good nutrition.	A	Health	27
	"What Do They Need?" *Worksheet (true-false)*	To identify the nutritional needs of people in different circumstances.	A	Health	28
	"Family Food Record" *Home work* *Worksheet (fill-in)*	To observe differences in amount of food eaten by family members.	A	Health	29
3	Saving The Vitamin C in Vegetables	To identify storage and cooking methods that help retain vitamins.	E	Health Science	30
	"How To Maximize Vitamins in Vegetables" *Information sheet*	To identify the best way to cook vegetables to retain vitamins.	E	Health	32
	"Help Save Me" *Worksheet (fill-in)*	To reinforce the best ways to conserve vitamin C.	A	Health	33

CURRICULUM GUIDE

Fourth Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
	"How to Save Vegetable" *Information sheet*	To review the method of cooking vegetables to conserve vitamins.	A	Health Art	34
	"Bradley C. Broccoli" *Flannel board story*	To illustrate the best way to prepare vegetables to conserve vitamins.	A	Health Art	35
4	Food Protection	To determine proper food storage methods.	E	Health Math Science	44
	"Better Safe Than Sorry" *Information sheet*	To identify safe food handling.	E	Health Science	46
	"Food Watch" *Worksheet (fill-in)*	To discover what happens to food when stored in refrigerator or at room temperature.	E	Health Science	47
	"Temperature Watch" *Worksheet (fill-in)*	To investigate the temperature of refrigerator freezer, and home living room.	E	Health Science	48
	"Supermarket Watch" *Worksheet (fill-in)*	To observe the temperatures of food storage places in the supermarket.	E	Health Science	49
	"Food Storage" *Worksheet (fill-in)*	To identify the correct food storage place.	E	Health	50
5	Historical and Cultural Meat Substitutes	To identify high protein meat substitutes used by early U.S. settlers and in Mexico.	A,B	Social Studies	51
	"What To Eat Instead of Meat?" *Worksheet (fill-in)*	To introduce meat substitute foods.	A,B	Social Studies Health	53
	"Historical and Cultural Recipes" *Recipes*	To practice preparation of meat substitute foods using proper sanitation techniques.	A,E	Health	54

CURRICULUM GUIDE

Fourth Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
6	Your Snacks - Good Or Bad?	To determine health promoting and health threatening snack foods.	A	Health Math	55
	"Snacks For Better Or Worse" *Worksheet (fill-in)*	To identify healthful snacks.	A	Health	57
7	Comparison Shopping	To compare supermarket prices to determine the best food buys.	B,C,D	Math	58
	"Compare Before You Buy" *Worksheet (fill-in)*	To compare food prices of two supermarkets to determine best buys.	B,D	Math	59
	"Coupon Savings" *Worksheet (fill-in)*	To determine savings from using food coupons.	B,D	Math	60
	"Supermarket Ads" *Information sheet*	To review units of measurements used in foods.	B,D	Math	61
8	Shopping Spree	To recognize that food prices are a factor which influence food choices.	B	Math Health	65
	"Big "A" Supermarket Grocery Store Price List" *Information sheet*	To determine prices for worksheets.	B,D	Math	66
	"Big "A" Supermarket $1.00 and $5.00 Shopping Spree Lists" *Worksheets (fill-in)*	To determine total cost of shopping spree and change.	B,D	Math	67
	"Four Food Group Shopping List" *Worksheet (fill-in)*	To select foods for a meal and determine cost.	B,D	Math Health	69
9	The Great American Farmer	To recognize factors that that affect the price and yield of farm products.	D	Math Social Studies	70
10	Factors Which Influence Food Choices	To identify how home and social environment influence food choices.	B,C	Social Studies	72

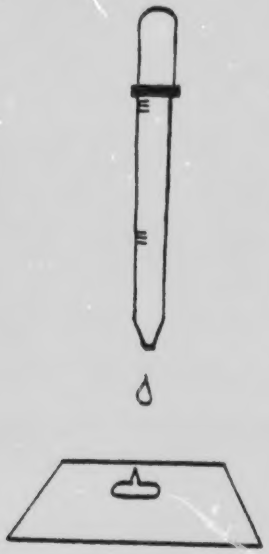
CURRICULUM GUIDE

Fourth Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
	"Food Choices" *Information sheet*	To select appropriate foods for a given occasion.	B,C	Social Studies	74
	"Who Decides What You'll Eat?" *Worksheet (fill in)*	To identify how family members influence which foods you eat.	B,C	Social Studies	75
11	Which Bread is Best For You? ENRICHMENT	To determine differences in refined and whole grains.	A	Health	76
12	What Am I Eating? - Plants ENRICHMENT	To classify edible plants into the parts of the plant they represent.	D	Science	78
	"Plant Parts" *Information sheet*	To list edible and inedible plants and flowers.	D	Science	80
	"Parts of Plants We Eat" *Worksheet (fill in)*	To identify the part of the plant that is edible.	D	Science	81
13	How Plants Work ENRICHMENT	To identify plant parts with a function of the part.	D	Science	82
	"Plant Physiology Discussion" *Information sheet*	To explain how plants manufacture and store food.	D	Science	85
	"Science In The Kitchen" *Worksheet (matching)*	To illustrate plant food with part of plant and its function.	D	Science	86
	"How Plants Work" *Worksheet (matching)*	To reinforce plant part and its function.	D	Science	87
14	Raw and Cooked - What's The Difference? ENRICHMENT	To investigate and identify changes in raw and cooked foods.	E	Health	88
	"Raw and Cooked - What's The Difference?" *Worksheet (fill in)*	To compare raw and cooked foods for color, texture and taste.	E	Health	90

NAME ______________________

LIFE IN A DROP OF WATER



YOU WILL NEED:

A) ONE DROP OF FISHTANK WATER
B) A MICROSCOPE SLIDE
C) A MICROSCOPE
D) AN EYE DROPPER

DIRECTIONS:

1. TAKE A DROP OF WATER FROM A FISH TANK.
2. DROP ONE DROP OF THE WATER ON THE MICROSCOPE SLIDE.
3. EXAMINE THE SLIDE UNDER THE MICROSCOPE.
4. LIST THE LIVING THINGS THAT YOU FIND IN A DROP OF WATER.

HERE IS WHAT YOU MIGHT SEE!

ALGAE: THE SIMPLEST PLANTS. THEY HAVE AN ARRANGEMENT OF CELLS VERY MUCH ALIKE. THEY CAN BE REDDISH, BLUE-GREEN, GOLDEN, OR BROWN.

FUNGI: SIMPLE PLANTS LIKE ALGAE. THEY ARE BLACK, YELLOW, WHITE, OR BROWN. THEY LIVE ON DEAD MATERIAL.

GERMS OR BACTERIA: THE SMALLEST FUNGI. THEY LOOK LIKE FLOATING OR MOVING DOTS.

SCOOTERS: ONE-CELLED ANIMALS THAT HAVE MANY DIFFERENT SHAPES. THEY SCOOT THROUGH THE WATER.

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NAME ______________________

WHY IS LACK OF FOOD A WORLD PROBLEM?

DIRECTIONS: READ PAGES 62 THROUGH 72 IN YOUR HEALTH BOOK TO ANSWER THESE QUESTIONS.

1. WHAT IS ONE REASON FOR THE LACK OF FOOD IN SOME COUNTRIES?
(PAGE 62)
____
____

2. WHY ARE LONG, DRY SPELLS BAD FOR CROPS? ______________
(PAGE 62)
____

3. HOW DOES THE UNITED STATES HELP COUNTRIES THAT NEED MORE FOOD?
(PAGE 62)
____
____

4. WHY ARE SCIENTISTS TRYING TO MAKE NEW TYPES OF FOOD? __________
(PAGE 63)
____

5. READ PAGE 63 AND LOOK AT THE PICTURE. WHAT ARE FOUR SOURCES OF PROTEIN SHOWN THERE?
(PAGE 63)

1. ______________ 3. ______________
2. ______________ 4. ______________

6. HOW CAN BETTER SEEDS, LIKE THE NEW RICE PLANT ON PAGE 64, HELP SOME POOR COUNTRIES GROW MORE FOOD?
(PAGE 64)
____
____

7. WHAT ARE THE FOOD PRODUCTS ON PAGES 70-71 MADE FROM?
(PAGES 70-71)
____

8. WHAT IS ANOTHER WORLD FOR ARTIFICIAL FOOD? ______________
(PAGE 63)

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Concepts E, C, D

ENRICHMENT

Fourth Grade
Subject Area: Social Studies

16

KITCHEN METRICS

Behavioral Objective: The student will record metric weights on packaged foods and prepare a recipe using metric measuring utensils.

Process Objectives: Flexibility in ideas, fluency in creating alternatives, ability to see alternative points of view and their rationale.

Teacher Information: As an extension of introduction to metrics, the study of metric measurements and food is both useful and interesting to students. This lesson does not cover the introduction of the metric system which is covered well in standard texts. Additional information on pg. 99.

Materials:

- Liter measure
- Metric measuring cup set
- Metric measuring spoons
- Metric oven temperature chart
- Metric Fun Cooking Cards (Project SNAC)
- Metric recipes
- Ingredients for selected recipes
- Metric balance scale
- Knife or tongue depressor
- Water for liquid measuring
- Flour or sand for dry measuring
- Student worksheet "Measuring in Metrics"

Vocabulary: length, volume, kilograms, liter, centimeters, ingredients, mass, temperature, milliliter, celcius, Fahrenheit, measurement

ACTIVITY

Motivation:

Review metric measurement terms for length, mass, temperature, volume. Which ones do students think are used in the food industry and the kitchen. (all of them, especially grams, kilograms, milliliter, liter, degrees celcius, and centimeters)

Development:

Have students read the measurements on the metric measuring cups and spoons and practice measuring with water and flour or another dry ingredient. Demonstrate leveling of dry ingredients with a knife or tongue depressor. Practice weighing items on the gram scale.

Prepare two metric recipes. Recipes can be selected from the "Metric Fun Cooking Cards" or those attached.

Have students complete the student worksheet, "Measuring in Metrics". In class, have several students report their findings.

Evaluation:

Did each student record metric measurements on food packages accurately?

Did each student take an active part in measuring?

Additional Activities:

For more indepth study of metric measurement, use the following student worksheets:

"Comparing Mass and Volume"
"Food I Measured in Metric"
"Weight in Grams"

Additional Resources:

Metric Cookbooks (Project SNAC)

Metric Fun Cooking Cards by Long, B. and Waite, C. Teachers Press, 1975.

Metric Milkshakes and Witches Cakes, Johnson, G. and Povey, G. Scholastic, 1976

Ethnic Cooking with Native Plants, Long, B. and Waite, C. Teachers Press, 1975.

Most of these recipes are for individual servings and are based on plants native to the country the recipe originates in. Could be used for the study of native cooking.

Mom's Recipes Gone Metric, Bemis, Lorry, Chalfant Press, 1974

Recipes for small groups. Simple old-fashioned recipes have been changed into metric measures. Drawback is the complexity of the measurements.

NAME ______________________

METRIC RECIPES IN MILLILITERS

IF YOU DON'T HAVE METRIC MEASURING CUPS AND SPOONS, MARK A SCALE ON THE OUTSIDE OF A STYROFOAM CUP AT INTERVALS OF 25 ML. USE THE CUP AT HOME TO MEASURE THE INGREDIENTS FOR THE FOLLOWING RECIPES. A REGULAR TEASPOON YOU HAVE AT HOME IS EQUAL TO 5 ML.

2+2+2 OR SNACK METRIC

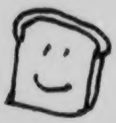
50 ML RAISINS

50 ML PEANUTS

50 ML GRANOLA

1. MEASURE AND MIX EVERYTHING WELL.
2. WRAP IN PLASTIC WRAP IN SINGLE-SIZE SERVINGS.

O.J. SURPRISE SANDWICH



25 ML ORANGE JUICE

50 ML PEANUT BUTTER

25 ML RAISINS

2 SLICES OF WHOLE GRAIN BREAD

1. MEASURE ORANGE JUICE, PEANUT BUTTER, AND RAISINS INTO A SMALL BOWL.
2. MIX WELL.
3. ON ONE SLICE OF BREAD SPREAD THE O.J. SURPRISE.
4. TOP WITH THE SECOND SLICE OF BREAD.
5. CUT IN HALF AND SHARE WITH YOUR PARTNER.

METRIC DELIGHT SALAD

125 ML FRUIT COCKTAIL, DRAINED

125 ML SMALL MARSHMALLOWS

125 ML YOGURT, PLAIN

1. MIX EVERYTHING TOGETHER IN A BOWL.
2. SERVE ON A LETTUCE LEAF.

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SPROUT SLAW SALAD

75 ML CARROTS, RAW - CUT INTO CUBES
50 ML CHOPPED CELERY
75 ML BEAN SPROUTS
25 ML RAISINS
50 ML MAYONNAISE
1 ML SALT

1. PEEL OR SCRAPE CARROT AND CUT INTO SMALL CUBES.
2. CHOP CELERY.
3. MEASURE ALL INGREDIENTS INTO A SMALL BOWL.
4. STIR WELL.

ORANGE COOLER (FOR 6 LARGE SERVINGS)

250 ML ORANGE JUICE
360 ML PINEAPPLE JUICE
1 LITER GINGERALE

STIR TOGETHER IN A LARGE BOWL.
ADD ICE.

MEASURING TIPS

1 CUP = 240 ML
½ CUP = 120 ML
¼ CUP = 60 ML
1 TABLESPOON = 15 ML
1 TEASPOON = 5 ML

BRAN MUFFINS

1 EGG, BEATEN
225 ML MILK
50 ML VEGETABLE OIL
25 ML MOLASSES
375 ML ALL BRAN CEREAL

250 ML FLOUR
15 ML BAKING SODA
5 ML SALT
90 ML BROWN SUGAR
125 ML RAISINS

1. MIX TOGETHER THE BEATEN EGG, MILK, VEGETABLE OIL AND MOLASSES.
2. STIR IN THE BRAN AND ALLOW MIXTURE TO STAND FOR 5 MINUTES.
3. SIFT TOGETHER THE FLOUR, BAKING SODA, AND SALT. ADD THE BROWN SUGAR AND MIX WELL.
4. ADD THE BRAN MIXTURE AND THE RAISINS TO THE DRY INGREDIENTS, STIRRING UNTIL JUST MOISTENED. DO NOT OVERMIX.
5. FILL MUFFIN PAN LINERS 2/3 FULL.
6. BAKE AT 200 DEGREES C FOR 25 MINUTES.

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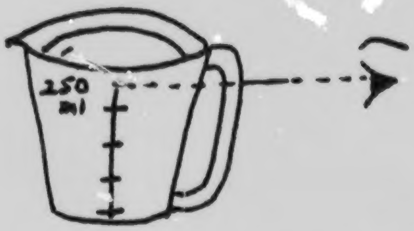
Teacher Information

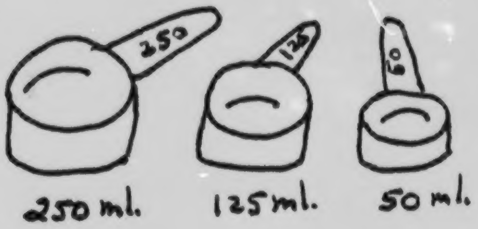
Oven Temperatures
(rounded)

Degrees Fahrenheit	Degrees Celcius
250 - 275	120-- 135
300 - 325	150 - 165
350 - 375	175 - 190
400 - 425	205 - 220
450 - 475	230 - 245
500 - 550	260 - 290

Measuring Cups

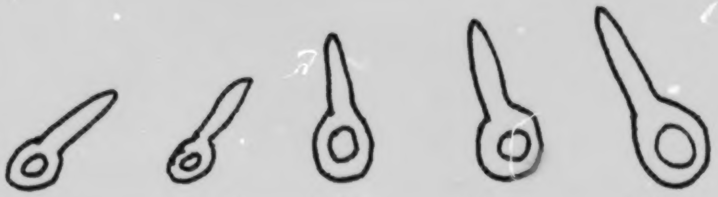


For liquids


250
125
50
250 ml.
125 ml.
50 ml.

For dry ingredients

Measuring Spoons



1 ml. 2 ml. 5 ml. 15 ml. 25 ml.

If metric measuring spoons are not available

label 1 teaspoon " 5 ml"

label 1 tablespoon "15 ml"

Metric measuring equipment is available from Enrich, 760 Kifer Rd., Sunnyvale, CA 94086

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NAME ______________________________

MEASURING IN METRICS

DIRECTIONS: TAKE THIS SHEET HOME AND FIND FOODS WITH METRIC WEIGHTS AND MEASURES TO COMPLETE THIS PAGE.

1. FIND A FOOD LABEL THAT TELLS THE WEIGHT OF THE FOOD IN GRAMS.

NAME OF FOOD ______________________________

WEIGHT IN GRAMS ______________________________

2. MAKE A LIST OF FOODS AND THEIR METRIC MEASUREMENTS. LOOK AT FOOD BOXES, BOTTLES, WRAPPERS AND BAGS. WRITE THE METRIC MEASUREMENT FOR 10 FOODS. IF YOU FIND MORE, USE THE OTHER SIDE OF THE PAPER. BE SURE TO WRITE THE WORDS ML, LITER, OR GRAMS WITH YOUR MEASUREMENT.

	FOOD NAME	METRIC MEASUREMENT OR WEIGHT
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

BONUS QUESTION:

CAN YOU FIND A LARGE FOOD PACKAGE THAT WEIGHS MORE THAN 1 KILOGRAM?

NAME OF FOOD ______________________________

WEIGHT IN KG ______________________________

NAME ______________________________

COMPARING MASS AND VOLUME

GET A SET OF METRIC MEASURING CUPS, A SET OF METRIC MEASURING SPOONS, AND A METRIC SCALE.

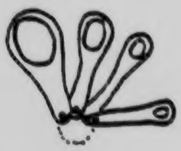
WEIGH THE FOODS LISTED BELOW AND RECORD THE WEIGHT. THEN POUR THE FOOD INTO A MEASURING CUP OR SCOOP OUT WITH A MEASURING SPOON AND WRITE THE NUMBER OF ML.

BEFORE YOU WEIGH EACH FOOD SUBTRACT THE WEIGHT OF THE CONTAINER.

1. A SCOOP OF FLOUR WEIGHS ______G AND EQUALS ______ML.
2. A PAPER CUP OF SUGAR WEIGHS ______G AND EQUALS ______ML.
3. A PINCH OF SALT WEIGHS ______G AND EQUALS ______ML.
4. A PAPER CUP OF WATER WEIGHS ______G AND EQUALS ______ML.

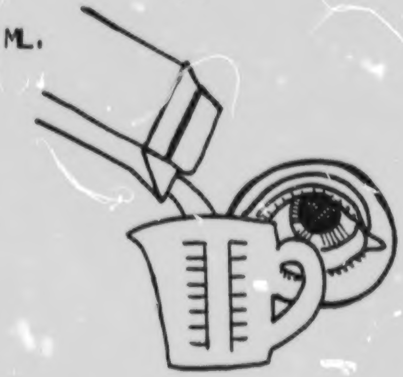
DOES THE FLOUR WEIGH MORE IN GRAMS THAN IT EQUALS IN MILLILITERS? DOES IT WEIGH LESS? ____________

WHICH WEIGHS MORE? A PAPER CUP OF SUGAR OR A PAPER CUP OF WATER? ______________________________



NAME ______________________

FOOD I MEASURED IN METRIC MILLILITER MEASUREMENTS



A MILK CARTON FULL OF WATER CONTAINS __________ ML.

A HANDFUL OF SEEDS IS __________ ML.

A PAPER CUP FULL OF FLOUR IS __________ML.

METRIC TEMPERATURES

THE ICE IS __________ DEGREES CELSIUS (°C).

THE ROOM TEMPERATURE IS __________ °C.

THE TEMPERATURE OF MY HAND IS __________°C.

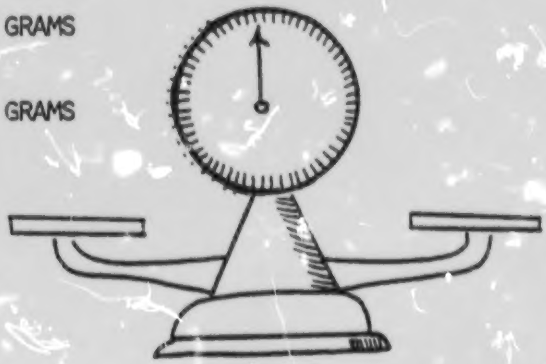
WATER BOILS AT __________ °C.

NAME ______________________________

WEIGHT IN GRAMS

WEIGH THESE FOODS ON A METRIC SCALE. RECORD THE WEIGHT IN GRAMS.

1. 1 PEANUT ______________________________ GRAMS
2. 1 APPLE ________________________________ GRAMS
3. 1 FULL MILK CARTON ____________________ GRAMS
4. 1 EMPTY MILK CARTON ___________________ GRAMS
5. HOW MANY GRAMS WOULD 10 PEANUTS WEIGH?



____

6. HOW MANY GRAMS WOULD ½ OF AN APPLE WEIGH?

____

7. HOW MUCH DOES THE MILK INSIDE THE CARTON WEIGH? (SUBTRACT THE WEIGHT OF THE EMPTY CARTON FROM THE WEIGHT OF THE FULL CARTON)

____

BRING FOOD TO SCHOOL. JUST ONE OF ANYTHING WILL BE FINE. WEIGH EACH FOOD AND RECORD WEIGHT.

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Concepts C, D, E

ENRICHMENT

Fourth Grade

Subject Areas: Math, Language Arts, Social Studies, Science, Health

17

WHAT CAN YOU DO WITH A SUPERMARKET?

Behavioral Objective: The student will practice reading, math, science, social studies, and nutrition skills in the market.

Process Objectives: Generalizing knowledge; extrapolating.

Teacher Information: The supermarket is a great classroom. A trip to the supermarket can lead to many activities in all area of the curriculum. Students can put their skills to practical use, observe, and be introduced to new skills and concepts in a real life situation. A collection of food packages, food models and scales in the classroom enables supermarketing to continue back in the classroom after the field trip is over.

Materials: A Willing Supermarket Manager

Sound filmstrip - "Supermarket" (District IMC)
16 mm film - "Supermarket (County IMC #0989)

ACTIVITY

Language Arts

1. Give students 15 minutes to find words they recognize on packages and make a list. Later combine the words in a pack of index cards for review, alphabetizing.
2. Have students look for intentional misspellings on food packages. Make a list and compare with correct spelling. Why do food companies spell words incorrectly?

Math

1. Before the trip make a shopping list. At the store price items and add to find the total cost. Students can find the price of several brands of the same item and subtract to find the difference.
2. Estimate the weight of produce and then weigh it to check accuracy.
3. Count the number of shoppers in the store - how many men and women? Why is this?

Social Studies

1. Look for ethnic foods; Oriental, Mexican - make a list of foods that are sold in the store.
2. Find out the job titles of all the people who work in the store.
3. Read labels to find out where food comes from. Write names of cities and countries down and find on a map or globe back in class.

Science

1. Take a thermometer to find out the temperature in the different parts of the store. Ask the manager to explain why.
2. The butcher can show the students the various cuts of meat and discuss the storage and sanitation procedures. Ask to see some internal organs.
3. Classify each item in the produce section by the part of plant it is - root, stem, leaf, flower, fruit, or seed.
4. Look for foods that are preserved different ways, canned, dried, freeze dried pickled, smoked, frozen.

Nutrition

1. Plan a balanced menu for a day. Make a shopping list and determine the cost.
2. Divide the class into 4 groups to represent the Four Food Groups or into 6 groups to represent nutrient classes. Have students decide on a food they would buy to fit into each group.
3. Find a food the students have never eaten. Bring samples to the classroom to taste.
4. Read labels to find out what they tell you.

Evaluation:

1. Make a list of commercialized spelling words and have students write the proper spelling of each word.
2. Provide packages of several foods of the same type, but different in brands and prices. Ask students to find the difference in the price.
3. Ask student to name four ethnic foods available in the supermarket.
4. Ask students to name three or more job titles of people who work at the supermarket and describe what they do.
5. Provide several food wrappers/labels. Have students identify the city where the food was packaged by reading the label.
6. Ask students to explain the varying temperatures in the supermarket.
7. Ask students to name a food eaten for each of the parts of a plant: root, stem, leaf, flower, fruit, or seed.
8. Ask students to name four differenct ways that foods are preserved.
9. Ask students to plan a menu and add up its cost. Be sure it a balanced meal.

Concepts C, E

ENRICHMENT

Fourth Grade

Subject Area: Health
Social Studies

18

KITCHEN TOUR

Behavioral Objective: The student will investigate and list information about food safety, storage, and preparation as a part of a school or restaurant tour.

Process Objectives: Active curiosity about the social world, skill in engaging in the processes of observing, inferring, valuing.

Teacher Information: Make arrangements in advance to tour the school kitchen or a restaurant. Provide the food service personnel with a copy of the student question sheet in advance of the visit.

Materials: Prior arrangement with kitchen manager.
"Kitchen Tour Report" student worksheet

Vocabulary: Equipment, storage, preparation

ACTIVITY

Motivation:

Before Tour:

A. Before the tour of the kitchen, discuss safety procedures the students should follow. Tell students the names and titles of people who work in the kitchen.

B. Have students read the questions on the "Kitchen Tour Report" before the tour so they will know what to look and listen for.

Development:

Tour the kitchen. Provide tour guide with copy of the "Kitchen Tour Report".

After Tour:

Discuss information gathered. Write a thank you letter.

Additional fieldtrips to a restaurant kitchen or flight kitchen can lead to more questions and answers about additional food-related careers.

Evaluation:

After the fieldtrip, discuss the answers on the "Kitchen Tour Report."

NAME ______________________________

KITCHEN TOUR REPORT

YOUR KITCHEN TOUR IN A RESTAURANT OR SCHOOL KITCHEN WILL GIVE YOU AN IDEA OF HOW FOOD IS PREPARED FOR LARGE GROUPS OF PEOPLE. KEEP YOUR EYES AND EARS OPEN AND YOU CAN LEARN A LOT!

TAKE THIS REPORT FORM WITH YOU SO YOU CAN ANSWER ALL THE QUESTIONS.

1. WHICH KITCHEN DID YOU VISIT? ______________________________

2. HOW MANY PEOPLE WORK IN THE KITCHEN? ________________

3. WHAT ARE THEIR JOBS? ______________________________

____

4. NAME THREE THINGS THAT ARE DONE FOR SAFETY.

____

____

____

5. NAME THREE WAYS THE FOOD AND KITCHEN ARE KEPT CLEAN.

____

____

____

6. WHAT IS THE TEMPERATURE OF THE FREEZER? ________________

7. WHAT LARGE EQUIPMENT IS USED IN THE KITCHEN? ________________

____

8. FIND A FOOD ON TODAY'S MENU THAT BELONGS TO EACH OF THE FOUR FOOD GROUPS. WRITE THE FOODS AND THEIR FOOD GROUPS ON THE BACK OF THIS PAPER.

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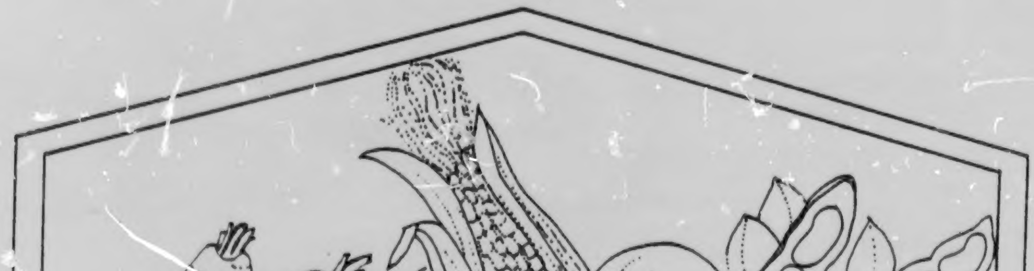
WORKSHEET ANSWER KEYS

Answer keys for the worksheets in the previous lessons have been reduced in size and arranged four to a page in sequential order. Each answer has the same title and page number as the original worksheet used in the lesson.



ANSWER KEY

PROTEIN, CARBOHYDRATE, AND FAT

ENERGY NUTRIENTS

FILL IN THE CHART:

NUTRIENT	WHAT IT DOES	FOODS
PROTEIN	NEEDED TO BUILD AND REPAIR CELLS AND FOR GROWTH	MEAT MILK EGGS LEGUMES NUTS
CARBOHYDRATE	NEEDED FOR ENERGY	BREADS AND CEREALS FRUITS AND VEGETABLES LEGUMES NUTS
FATS	NEEDED TO CARRY FAT - SOLUBLE VITAMINS, FOR ESSENTIAL FATTY ACIDS, INSULATION AND ENERGY	BUTTER MARGARINE SALAD OILS NUTS, EGG YOLK AVOCADO BACON

WHAT IS ENERGY FROM FOODS CALLED? CALORIES

ANSWER KEY

VITAMIN ALPHABET CHART

FILL IN THE CHART:

VITAMIN	WHAT IT DOES	FOODS
A	NEEDED FOR HEALTHY SKIN, EYES, AND BONES	GREEN AND YELLOW VEGETABLES, APRICOTS MILK, LIVER
B	NEEDED FOR HEALTHY NERVES, GOOD DIGESTION	ENRICHED BREADS AND CEREALS, MEAT, MILK, LEGUMES, EGGS
C	NEEDED FOR HEALTHY GUMS, HEALTHY BLOOD VESSELS, WOUND HEALING	CITRUS FRUITS, STRAWBERRIES TOMATOES POTATOES CANTALOUPE
D	NEEDED FOR HEALTHY BONES AND TEETH	FORTIFIED MILK FISH LIVER OILS LIVER

CAN YOU NAME SOME MORE VITAMINS? E, K

ANSWER KEY

MINERALS

A CLASS OF NUTRIENTS

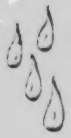
FILL IN THE CHART:

MINERAL	WHAT IT DOES	FOODS
CALCIUM	NEEDED FOR STRONG BONES AND TEETH	MILK AND FOODS MADE WITH MILK, LEAFY GREEN VEGETABLES, SARDINES
IRON	NEEDED FOR HEALTHY RED BLOOD CELLS	LIVER EGGS GREEN, LEAFY VEGETABLES LEGUMES DRIED FRUITS

CAN YOU NAME SOME OTHER MINERALS? POTASSIUM, SODIUM, PHOSPHORUS, IODINE, SULFUR, MAGNESIUM

ANSWER KEY

WATER: A NUTRIENT FOR LIFE



DID YOU KNOW THAT YOU ARE TWO-THIRDS WATER?

WATER IS A NUTRIENT NECESSARY FOR LIFE?

YES, INDEED. YOU COULD NOT LIVE FOR LONG WITHOUT WATER. EVERY CELL IN YOUR BODY NEEDS WATER TO KEEP ITS SHAPE. WHAT HAPPENS TO PLANTS THAT DON'T HAVE WATER?

QUESTIONS:

NAME A BODY LIQUID THAT HAS WATER. (HINT: IT IS RED)
BLOOD

NAME 10 FOODS THAT HAVE WATER.

1. MILK
2. CELERY
3. YOGURT
4. APPLE
5. ORANGE JUICE
6. LETTUCE
7. TOMATOES
8. GRAPEFRUIT
9. SOUPS
10. CORN

NAME ANSWER KEY

WHO AM I ???????????

AM I PROTEIN, CARBOHYDRATE, FAT OR CALORIES?

I AM A NUTRIENT.
I HELP YOU GROW AND BE STRONG.
I CAN BE FOUND IN THE MEAT GROUP AND MILK GROUP.

WHO AM I? PROTEIN

I AM A NUTRIENT.
I CAN BE FOUND IN OIL, BUTTER, BACON AND FRIED FOODS.
I GIVE YOU LOTS OF ENERGY AND HELP TO KEEP YOU WARM.

WHO AM I? FAT

I AM NOT A NUTRIENT.
I AM FOUND IN PROTEIN, CARBOHYDRATE, AND FAT.
I AM THE ENERGY THAT YOU GET FROM FOOD.

WHO AM I? CALORIES

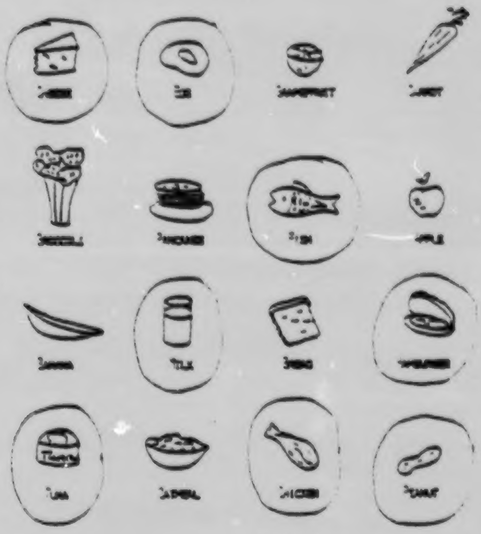
I AM A NUTRIENT.
I CAN BE FOUND IN BREADS, FRUITS, CEREALS AND SWEETS.
I GIVE YOU ENERGY TO WORK AND PLAY.

WHO AM I? CARBOHYDRATE

NAME ANSWER KEY

PROTEIN FOR MAKING US GROW

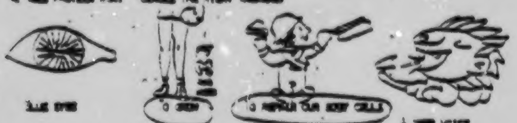
CIRCLE THE PROTEIN-RICH FOODS.



NAME ANSWER KEY

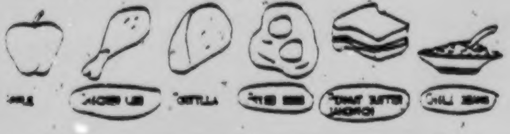
PROTEIN FUN SHEET

1. WE NEED PROTEIN FOR: (CIRCLE THE RIGHT ANSWERS)



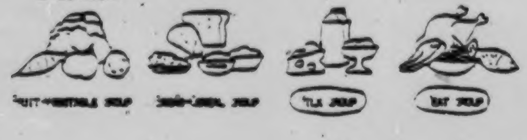
BLUE EYES [✓ TO GROW] [✓ TO REPAIR OUR BODY CELLS] A DEEP VOICE

2. FOODS WITH LOTS OF PROTEIN ARE: (CIRCLE 4 FOODS)



APPLE [✓ CHICKEN LEG] TORTILLA [✓ FRIED EGGS] [✓ PEANUT BUTTER SANDWICH] [✓ CHILI BEANS]

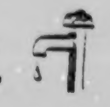
3. I EAT FOODS FROM THESE 2 FOOD GROUPS BECAUSE THEY HAVE LOTS OF PROTEIN. CIRCLE THE TWO FOOD GROUPS.



FRUIT-VEGETABLE GROUP BREAD-CEREAL GROUP [✓ MILK GROUP] [✓ MEAT GROUP]

NAME ANSWER KEY

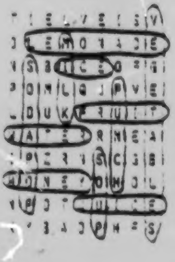
WATER WORD HUNT

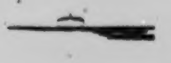


WALLY WATER IS A VERY IMPORTANT NUTRIENT. YOUR BODY IS ALMOST TWO-THIRDS WATER. WHERE DO YOU GET ALL THAT WATER? WHY FROM THE THINGS YOU DRINK, OF COURSE. BUT DID YOU KNOW THAT MOST FOODS CONTAIN SOME WATER TOO?

FIND THESE WATER FILLED DRINKS AND FOODS.

MILK
PUNCH
FRUIT
WATER
JUICE
SODA POP
VEGETABLES
HONEY
SOUP
ICE
LEMONADE





NAME ANSWER KEY

HOW MUCH HAVE YOU LEARNED?

TO FIND OUT HOW MUCH YOU HAVE LEARNED FROM YOUR NUTRITION SEARCH, DO YOUR BEST TO COMPLETE THESE STATEMENTS.

1. NUTRITION IS THE SCIENCE OF THE FOOD YOU EAT AND HOW YOUR BODY USES IT.
2. MY BODY IS MADE OF MILLIONS OF TINY CELLS.
3. MY BODY USES NUTRIENTS FROM FOOD TO GROW AND STAY HEALTHY.
4. THE ENERGY THAT IS STORED IN FOOD IS CALLED CALORIES.
5. THE SIX NUTRIENT CLASSES ARE: (THE FIRST LETTER OF EACH WORD IS GIVEN)

P PROTEIN
C CARBOHYDRATE
F FAT
M MINERAL
V VITAMIN
W WATER

6. THE FOUR FOOD GROUPS ARE:

MEAT
MILK
FRUIT AND VEGETABLE
BREAD AND CEREAL

NAME ANSWER KEY

WHAT CAN THE RIGHT FOODS DO FOR YOU?

DIRECTIONS:
READ PAGES 56 AND 57 IN HEALTH AND GROWTH 4 TEXT. USE THE BOOK TO HELP YOU ANSWER THESE QUESTIONS.

1. HOW WOULD YOU BE LIKELY TO FEEL IF YOU EAT A POOR BREAKFAST OR NONE AT ALL?
CROSS AND TIRED AND HUNGRY

2. HOW WILL A GOOD BREAKFAST HELP YOU?
TO FEEL AT YOUR BEST AND TO BE ABLE TO WORK WELL DURING THE MORNING.

3. WOULD A DIET OF JUST MILK BE GOOD FOR YOU? NO
WHY OR WHY NOT? NO SINGLE FOOD CAN TAKE CARE OF ALL YOUR NEEDS

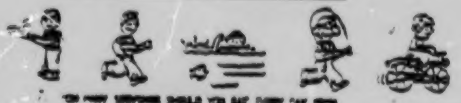
4. FOODS RICH IN FAT ARE GOOD ENERGY FOODS. WRITE 2 FOODS THAT ARE RICH IN FAT.
BUTTER AND NUTS

5. WHAT OTHER KINDS OF FOODS ARE ENERGY FOODS?
STARCHY FOODS LIKE BREAD, RICE, POTATOES, CEREAL

FOODS HIGH IN SUGAR - COOKIES, ICE CREAM

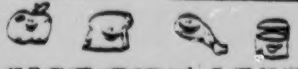
ANSWER KEY

6. WHAT KIND OF ENERGY DO HIGH-SUGAR FOODS PROVIDE?
QUICK ENERGY



7. HOW MANY SERVINGS SHOULD YOU EAT EVERY DAY FROM THE FOUR FOOD GROUPS? YOU CAN FIND THE ANSWER ON PAGES 60 AND 61 IF YOU DO NOT ALREADY KNOW.

FOOD GROUP	NUMBER OF SERVINGS PER DAY
MILK GROUP	3
MEAT GROUP	2
VEGETABLE-FRUIT GROUP	4
BREAD-CEREAL GROUP	4



8. WHY DO YOU NEED WATER EVERY DAY? TO KEEP THE BODY WORKING PROPERLY
9. HOW MANY GLASSES OF WATER DO YOU NEED EVERY DAY?
5 - 6 GLASSES A DAY

ANSWER KEY

TESTING FOODS

1. FILL IN THIS CHART. WRITE THE NAME OF THE FOODS YOU TEST. WRITE "YES" IF THE NUTRIENT IS IN IT.

ANSWERS WILL VARY

FOOD	IS FAT PRESENT?	IS STARCH PRESENT?
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

2. WHICH FOODS HAVE BOTH STARCH AND FAT IN THEM?
ANSWERS WILL VARY

3. WHAT IS ANOTHER NAME FOR STARCH?
CIRCLE ONE: PROTEIN FAT [✓ CARBOHYDRATE]

NAME ANSWER KEY

Food Games

Food Groups		Servings
Vegetable-Fruit Group	4	A. 4
Milk Group	3	B. 2
Meat Group	2	C. 3
Bread-Cereal Group	4	D. 4

FILL IN THE
BLANKS WITH THE RIGHT
NUMBER

Food		Food Groups
Eggs	3	1. Vegetable-Fruit Group
Oranges	1	2. Milk Group
Ice Cream	2	3. Meat Group
Cereal	4	4. Bread-Cereal Group
Cabbage	1	
Corn	1	
Peanuts	3	

Food		Nutrients
Milk	2,3,8	1. Iron
Peanut Butter	3	2. Calcium
Carrots	5	3. Protein
Eggs	1,3,5	4. Calories
Cereal	5	5. Vitamin A
Oranges	7	6. Vitamin B
Liver	1,3,5	7. Vitamin C
Spinach	5	8. Vitamin D
Candy	4	

ALL HAVE CALORIES

NAME ANSWER KEY

Catch a Nutrient

Can you find the names of the six major nutrients below? Look up, down, and across to find these words. Circle them as you find them.

Find these nutrients: PROTEIN, FAT, CARBOHYDRATE, MINERALS, WATER, VITAMINS

Z A F T C P T A S
P E R V A Y I O P
M I N E R A L S Y
C A T I B F P V U
G S P R O T E I N
B A S E H T J T Z
C D S W Y E K A I
K V N E D G A M A
E I O T R L M I H
J S E F A T B N S
E M I U T R A S P
B W A T E R T E H

Name a food for which each of the six major nutrients is famous:

Protein: Meats, milk
Vitamins: Fruits and vegetables
Fat: Butter
Minerals: Meats, milk
Carbohydrate: Breads and cereals
Water: Water

NAME ANSWER KEY

What Do They Need?

Answer True (T) or False (F)

	True	False
1. People living in France don't need vitamins.		F
2. People who work hard, such as football players, need more calories (energy from food) than people who sit a lot, such as bus drivers.	T	
3. Some people need Vitamin C. Some people don't.		F
4. You can eat lots of food and still not get all the vitamins you need.	T	
5. Old people usually don't need to eat as much food as when they were younger.	T	
6. Babies and grownups need the same size serving of food.		F
7. Teenagers grow so fast they need to eat a lot of healthy food.	T	
8. A woman who is going to have a baby needs extra nutrients to help the baby grow.	T	

NAME ANSWER KEY

Family Food Record

Every living thing needs nutrients to grow, get energy, and to stay healthy. People and animals eat food to get the nutrients they need. Not every person needs the same amount of food to grow and stay healthy.

To find out about differences in the amount of food people eat, you will keep a record of how much the people at your house eat.

Here is your assignment:

1. Write down the name of everyone who eats dinner at your house tonight. Write down their age, too.
2. Watch to see who eats the most food and who eats the smallest amount of food.
3. After dinner, answer the questions at the bottom of the page.

ANSWERS WILL VARY

Names of Dinner Eaters Age

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________

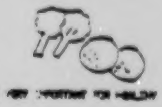
Questions

1. Who eats the most food in your house? ______________
   Why do you think this is so? ______________
2. Who eats the smallest amount of food? ______________
   Why do you think this is so? ______________

Why do people need different amounts of food?

Some people are bigger so they need a lot of food.
Some people get a lot of exercise so they need a lot of food.
Some people are on diets to lose weight so they eat less food.
People in cold climates need more food than people in warm climates to keep their bodies warm.

NAME ANSWER KEY

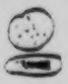


HELP SAVE ME

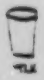
VITAMINS HELP YOU STAY HEALTHY. VITAMIN C IS VERY IMPORTANT FOR HEALTHY TEETH AND GUMS AND FOR FAST WOUND HEALING.

VITAMIN C IS FOUND IN MANY FOODS.

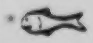
CIRCLE THE FOODS THAT ARE HIGH IN VITAMIN C.



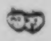
[✓ ORANGE]



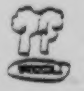
MILK



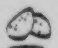
FISH



[✓ STRAWBERRY]



[✓ BROCCOLI]



[✓ LEMON]

YOU CAN SAVE VITAMIN C IF YOU KEEP THE FOOD AWAY FROM LIGHT, HEAT, AND AIR. CHECK THE BEST PLACE TO STORE FRUITS AND VEGETABLES.

__✓__ REFRIGERATOR

_____ IN YOUR DESK

_____ ON A KITCHEN COUNTER

_____ IN A DARK PLACE

_____ IN A PLASTIC BAG

TO KEEP THE VITAMIN C IN FRUITS AND VEGETABLES WHICH IS THE BEST WAY TO EAT THEM?

__✓__ RAW

_____ COOKED

WHEN YOU COOK A VEGETABLE, WHICH SAVES THE MOST VITAMIN C?

__✓__ STEAMING

_____ BOILING IN A LOT OF WATER

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GROUP ANSWER KEY

FOOD WATCH

YOUR MISSION, SHOULD YOU CHOOSE TO ACCEPT IT, IS TO COMPARE WHAT HAPPENS TO FOODS THAT ARE STORED IN THE REFRIGERATOR OR AT ROOM TEMPERATURE FOR FOUR DAYS.

HERE IS YOUR ASSIGNMENT:

1. CHOOSE ONE OF THESE FOODS:
   - 1 PIECE OF RAW MEAT, CHICKEN, OR FISH
   - 1 PIECE OF RAW FRUIT
   - 1 CARTON OF MILK
   - SOME CRACKERS
2. DIVIDE A SMALL PIECE OF THE FOOD YOU SELECT INTO TWO PARTS.
3. PUT ONE-HALF OF THE FOOD ON A PIECE OF PAPER TOWEL AND LEAVE IT ON THE COUNTER. PUT THE OTHER HALF IN THE REFRIGERATOR.
4. EVERY DAY FOR THE NEXT FOUR DAYS CHECK BOTH FOODS AND DESCRIBE HOW THE FOODS LOOK, SMELL, AND FEEL. DO NOT TASTE THE FOODS.
5. AFTER FOUR DAYS WRITE A PARAGRAPH TO TELL WHICH PLACE IS THE BEST TO STORE THE FOOD TO KEEP IT FRESH AND SAFE TO EAT.

WHICH FOOD WILL YOU TEST? ANSWERS WILL VARY

	REFRIGERATOR FOOD	ROOM TEMPERATURE FOOD
FIRST DAY		
SECOND DAY		
THIRD DAY		
FOURTH DAY		

WHERE DID YOUR FOOD STAY THE FRESHEST? REFRIGERATOR

WHY DO YOU THINK THIS IS SO? COLDER SO BACTERIA

COULD NOT GROW

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GROUP ANSWER KEY

TEMPERATURE WATCH

YOUR MISSION, SHOULD YOU CHOOSE TO ACCEPT IT, IS TO INVESTIGATE THE TEMPERATURES OF THE REFRIGERATOR, FREEZER, AND LIVING ROOM AT HOME.

YOU WILL REPORT YOUR FINDINGS IN DEGREES CELSIUS (C) AND FAHRENHEIT (F).

HERE IS YOUR ASSIGNMENT:

1. GET A THERMOMETER FROM YOUR TEACHER IF YOU DO NOT HAVE ONE AT HOME. IF YOUR THERMOMETER DOESN'T MEASURE IN BOTH CELSIUS AND FAHRENHEIT DEGREES, YOU WILL NEED ONE THERMOMETER OF EACH TYPE.
2. LEAVE THE THERMOMETER IN THE REFRIGERATOR ON A MIDDLE SHELF FOR AT LEAST 15 MINUTES. DO NOT OPEN THE REFRIGERATOR DOOR OR YOU WILL LET WARM AIR IN. TO READ THE TEMPERATURE, LOOK AT THE THERMOMETER WHILE IT IS STILL IN THE REFRIGERATOR. RECORD YOUR FINDINGS BELOW.
3. DO THE SAME THING IN THE FREEZER AND IN THE LIVING ROOM OF YOUR HOUSE. RECORD YOUR FINDINGS BELOW.

	FAHRENHEIT DEGREES (F)	CELSIUS DEGREES (C)
REFRIGERATOR (MIDDLE SHELF)	ANSWERS WILL VARY	
FREEZER		
LIVING ROOM		

BRING YOUR REPORT BACK TO CLASS AND COMPARE YOUR FINDINGS WITH OTHER STUDENTS.

1. WHAT ARE THE LOWEST AND HIGHEST TEMPERATURES REPORTED BY THE CLASS?

REFRIGERATOR	HIGHEST _____	LOWEST _____
FREEZER	HIGHEST _____	LOWEST _____
LIVING ROOM	HIGHEST _____	LOWEST _____

2. WHERE WOULD FOOD LAST THE LONGEST? FREEZER

WHY? COLDEST TEMPERATURE - BELOW FREEZING

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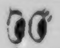
GROUP ANSWER KEY

SUPERMARKET WATCH



YOUR MISSION, SHOULD YOU CHOOSE TO ACCEPT IT, IS TO INVESTIGATE THE TEMPERATURES OF THE FOOD STORAGE PLACES IN THE SUPERMARKET.

TO FIND OUT THE TEMPERATURES IN THE SUPERMARKET YOU CAN EITHER TAKE A THERMOMETER TO THE STORE OR ASK THE STORE MANAGER.

HERE IS YOUR ASSIGNMENT:

1. YOU WILL NEED A THERMOMETER THAT TELLS BOTH CELSIUS (C) AND FAHRENHEIT (F) TEMPERATURES.
2. TAKE YOUR THERMOMETER TO THE STORE AND LEAVE IT IN EACH OF THE PLACES LISTED BELOW FOR ABOUT THREE MINUTES OR EVEN LONGER.
3. RECORD THE TEMPERATURES ON THE CHART BELOW.
4. REPORT YOUR FINDINGS BACK IN CLASS AND COMPARE WITH OTHER INVESTIGATORS.

ANSWERS WILL VARY

LOCATION	TEMPERATURE (FAHRENHEIT)	TEMPERATURE (CELSIUS)
BREAD SHELF	_____°	_____°
MEAT COUNTER	_____°	_____°
FROZEN FOOD SECTION	_____°	_____°
MILK SHELF	_____°	_____°
CANNED VEGETABLES SHELF	_____°	_____°
FRESH FRUIT AND VEGETABLE SECTION	_____°	_____°

WHY DO YOU THINK THE TEMPERATURES ARE DIFFERENT IN DIFFERENT PARTS OF THE STORE?

ANSWERS WILL VARY

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NAME ANSWER KEY

FOOD STORAGE

IT IS EASIER TO PLAN GOOD MEALS IF WE HAVE A VARIETY OF FOODS IN OUR HOMES. WHERE SHOULD THE FOLLOWING KINDS OF FOOD BE KEPT?

WRITE R IN FRONT OF EACH FOOD THAT SHOULD BE KEPT IN THE REFRIGERATOR AND C IN FRONT OF EACH THAT CAN BE KEPT IN THE CUPBOARD.

__R__ LIQUID MILK
__C__ DRY MILK
__C__ DRY COCOA
__C__ SUGAR
__R__ CATSUP
__C__ CRACKERS
__C__ RAISINS
__C__ SALT
__R__ CREAM
__R__ BUTTERMILK
__C__ FLOUR
__R__ LETTUCE
__C__ RICE
__C__ OATMEAL
__R__ BUTTER
__R__ EGGS
__R__ APPLES

__C__ DRY CHOCOLATE MILK DRINK MIX
__C__ CANNED VEGETABLES (UNOPENED)
__R__ FRESH GROUND MEAT
__R__ WEINERS (IN PACKAGE)
__C__ SPAGHETTI (UNCOOKED)
__C__ CANNED MILK (UNOPENED)
__R__ FRESH CARROTS
__C__ DRY BEANS
__C__ CORNMEAL
__C__ CORNFLAKES
__R__ BOLOGNA
__R__ COTTAGE CHEESE
__C__ VEGETABLE SHORTENING
__C__ DRY YEAST
__C__ SPICES
__C__ CANNED MEAT (UNOPENED)
__R__ CANNED MILK (OPENED)

NAME ANSWER KEY

WHAT TO EAT INSTEAD OF MEAT?

1. PUT AN "X" NEXT TO THE MEAT SUBSTITUTES:

_____ STEAK
__X__ CHILI BEANS
_____ SAUSAGE
__X__ PEANUTS
__X__ SPLIT PEA SOUP
__X__ NUTS

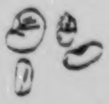
__X__ SOYBEANS
__X__ REFRIED BEANS
_____ FRIED CHICKEN
__X__ BLACKEYED PEAS
_____ APPLE JUICE
__X__ HOPPIN' JOHN

2. IF YOU WENT ON A LONG TRIP IN A HOT CAR, WHAT KIND OF SANDWICH WOULD BE SAFE TO EAT FOR SEVERAL HOURS?

_____ ROAST BEEF SANDWICH
__X__ PEANUT BUTTER SANDWICH

3. IF YOU WENT SHOPPING AND DIDN'T HAVE MUCH MONEY TO SPEND, WHICH MEAT GROUP FOOD WOULD BE THE BETTER BUY?

_____ STEAK
__X__ CHILI BEANS



NAME ANSWER KEY

SNACKS FOR BETTER OR WORSE

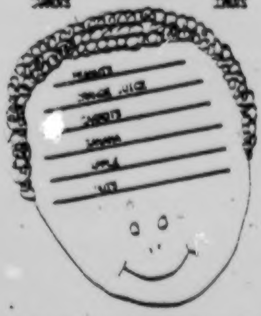
DIRECTIONS:

SOME SNACKS MAKE YOU FEEL GOOD BECAUSE THEY ARE GOOD FOR YOU. SOME SNACKS ARE NOT VERY GOOD FOR YOU. WRITE THE SNACKS THAT ARE GOOD FOR YOU IN THE HAPPY FACE AND THE NOT-SO-GOOD-FOR-YOU SNACKS IN THE SAD FACE.

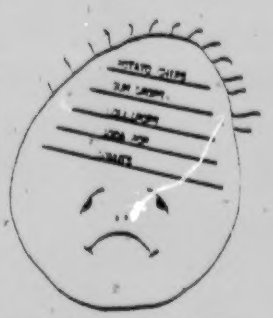
PEANUTS	PIZZA
POTATO CHIPS	SODA POP
ORANGE JUICE	APPLE
GUM DROPS	NUTS
LOLLIPOPS	BANANA
CARROTS	DONUTS

NOTE: FOODS FROM THE FOUR FOOD GROUPS ARE "HEALTHY" SNACKS. EXTRAS ARE MOSTLY "UNHEALTHY" SNACKS.

HEALTHY SNACKS HAVE PROTEIN, VITAMINS, MINERALS, AND FIBER.



PEANUTS
ORANGE JUICE
CARROTS
BANANA
APPLE
NUTS



POTATO CHIPS
GUM DROPS
LOLLIPOPS
SODA POP
DONUTS

WHY ARE SOME SNACKS BETTER FOR YOU THAN OTHER SNACKS? BECAUSE OF THE NUTRIENTS THEY HAVE SUCH AS PROTEIN, VITAMINS, MINERALS, AND FIBER.

NAME ANSWER KEY

COMPARE BEFORE YOU BUY!

DIRECTIONS: COMPARE THE PRICES AT THESE TWO SUPERMARKETS TO ANSWER THE QUESTIONS AT THE BOTTOM OF THE PAGE.

BILL'S BIG BUY MARKET

CHOCOLATE CHIP COOKIES
1 POUND BAG
[illegible]

CHICKEN LEGS
[illegible] PER POUND

[illegible] CEREAL
16 OUNCE BOX
[illegible]

MILK
[illegible] PER QUART

JUICY APPLES
[illegible] EACH

HIGHWAY SUPERMARKET

CHICKEN LEGS
[illegible] PER POUND

SUGAR SHOTS CEREAL
16 OZ. BOX
[illegible]

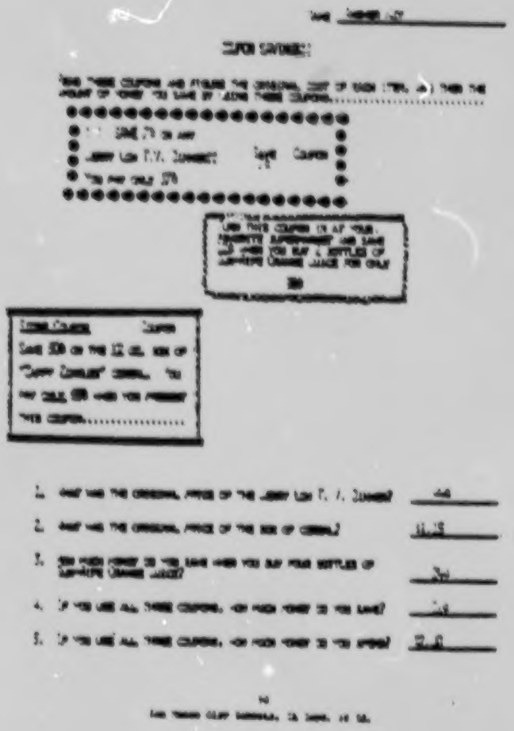
APPLES
2 FOR [illegible]

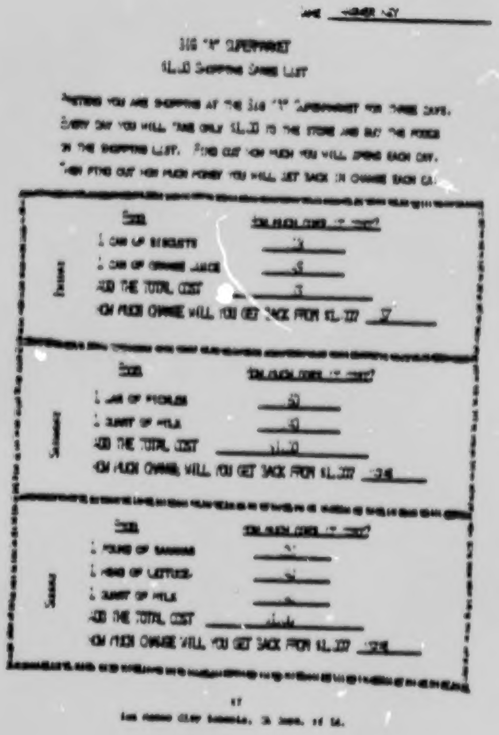
MILK
[illegible] PER ½ GALLON

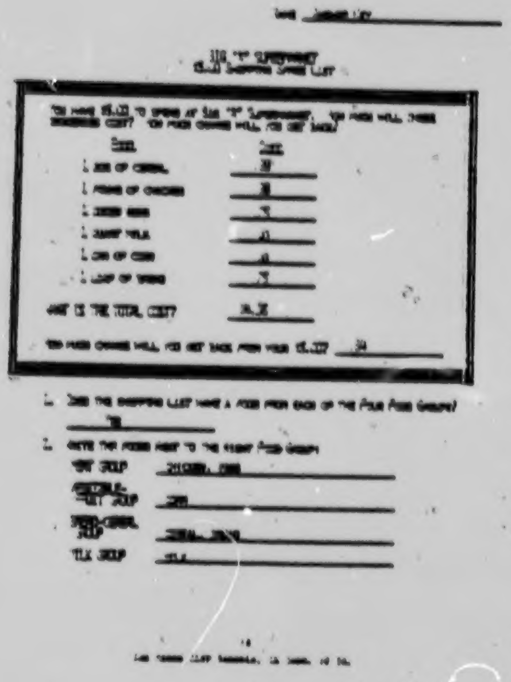
1 POUND BOX
CHOCOLATE CHIP COOKIES
[illegible]

WHERE WOULD YOU SHOP TO GET THE MOST FOR YOUR MONEY?

MILK? BILL'S BIG BUY MARKET
CHOCOLATE CHIP COOKIES? HIGHWAY SUPERMARKET
CHICKEN LEGS? HIGHWAY SUPERMARKET
APPLES? HIGHWAY SUPERMARKET
CEREAL? HIGHWAY SUPERMARKET







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NAME ANSWER KEY

WHO DECIDES WHAT YOU'LL EAT?

THE WAY ONE FAMILY EATS AND THE KINDS OF FOODS THEY EAT MAY BE DIFFERENT FROM THE WAY OTHER FAMILIES EAT.

TAKE A CLOSE LOOK AT WHO DECIDES WHAT YOU WILL EAT BY ANSWERING THESE QUESTIONS: ANSWERS WILL VARY

1. WHO DECIDES WHAT YOUR BREAKFAST WILL BE?

   WHO FIXES IT?

2. DO YOU USUALLY BUY YOUR LUNCH, BRING IT TO SCHOOL, OR GO HOME FOR LUNCH?

   WHO DECIDES WHAT YOUR LUNCH WILL BE?

   WHO FIXES IT?

3. WHO DECIDES WHAT YOUR DINNER WILL BE?

   WHO FIXES IT?

4. DO YOU THINK YOUR FAMILY EATS THE SAME WAY AS OTHER FAMILIES?

WRITE A WAY YOUR FAMILY MEMBERS INFLUENCE WHICH FOODS YOU EAT.

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NAME ANSWER KEY

PARTS OF PLANTS WE EAT

1. MANY OF THE FOODS WE EAT ARE PARTS OF PLANTS. LIST EACH FOOD NAME NEXT TO THE CORRECT PLANT PART.

PLANT FOODS WE EAT

CARROT
ONION
BRUSSELS SPROUTS
LETTUCE
TOMATO
PEANUT
BROCCOLI
GARLIC
BEET
RADISH
PARSLEY
SWEET POTATO
GREEN BEANS
APPLE
RICE
ARTICHOKE
POPCORN
CELERY
SESAME SEEDS
ASPARAGUS

PARTS OF PLANTS

BULBS
1. ONION
2. GARLIC

ROOTS
1. CARROT
2. BEET
3. RADISH
4. SWEET POTATO

LEAVES
1. LETTUCE
2. PARSLEY
3. BRUSSEL SPROUTS
4.

FRUITS
1. APPLE
2. TOMATO
3. GREEN BEANS

SEEDS
1. PEANUT
2. POPCORN
3. SESAME SEEDS
4. RICE

FLOWER
1. BROCCOLI
2. ARTICHOKE

STEM OR STALK
1. CELERY
2. ASPARAGUS

2. NAME A POISONOUS LEAF THAT MUST NOT BE EATEN. RHUBARB

3. NAME A POISONOUS SEED THAT MUST NOT BE EATEN. CASTOR BEAN

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NAME ANSWER KEY

SCIENCE IN THE KITCHEN

MANY OF OUR FOODS COME FROM PLANTS. SOME OF THE FOODS WE EAT FROM PLANTS ARE FRUITS, SOME ARE SEEDS, AND SOME ARE FLOWERS.

1. CAN YOU MATCH THE FOOD TO THE PART OF THE PLANT IT COMES FROM? DRAW A LINE.

ROOT	SPINACH
STEM	CARROT
LEAF	CELERY
FLOWER	APPLE
FRUIT	PEANUT
SEED	ARTICHOKE

2. EACH PART OF THE PLANT HAS A SPECIAL JOB. MATCH THE JOB TO THE CORRECT PLANT PART.

A) ROOT	HOLDS THE LEAVES UP TO THE SUN
B) STEM	HOLDS THE PLANT IN THE GROUND
C) LEAF	PRODUCES SEEDS
D) FLOWER	PRODUCES A NEW PLANT
E) FRUIT	CATCHES THE SUN'S ENERGY
F) SEED	STORES THE SEEDS

3. TO FIND OUT HOW WATER MOVES IN PLANTS PUT A PIECE OF CELERY IN A GLASS OF WATER WITH RED OR BLUE FOOD COLORING. WHAT HAPPENS TO THE COLOR OF THE LEAVES? CUT THE CELERY AND FIND THE CELERY TUBES. THEY CARRY WATER TO THE LEAVES LIKE AN ELEVATOR.

LEAVES TURN RED OR BLUE

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NAME ANSWER KEY

[illegible] PLANT JOBS

EACH PLANT PART HAS A SPECIAL JOB. CAN YOU DRAW A LINE TO THE CORRECT JOB EACH PART DOES?

A. ROOT	HOLDS THE LEAVES UP TO THE SUN
B. STEM	HOLDS THE PLANT IN THE GROUND
C. LEAF	PRODUCES A NEW PLANT
D. FRUIT	CATCHES THE SUN'S ENERGY
E. SEED	STORES THE SEEDS

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NAME ANSWER KEY

RAW AND COOKED - WHAT'S THE DIFFERENCE?

EGGS

COMPARE A RAW EGG WITH AN EGG THAT IS COOKED TO FIND WHAT CHANGES TAKE PLACE.

DON'T TASTE RAW EGGS. THEY ARE NOT SAFE TO EAT BECAUSE SOME RAW EGGS HAVE A "FOOD SPOILER" CALLED SALMONELLA THAT WILL MAKE YOUR STOMACH VERY UPSET FOR A DAY OR TWO. SALMONELLA IS ONE TYPE OF FOOD POISONING. COOKED EGGS ARE SAFE TO EAT.

LOOK AT THE RAW EGG IN A BOWL AND THEN COMPARE IT WITH AN EGG THAT HAS BEEN COOKED TO FILL IN THE LINES BELOW.

	RAW EGG	COOKED EGG
COLOR	YELLOW AND WHITE	YELLOW AND WHITE
FEEL	SLIPPERY	FIRM
SHAPE	FLAT	DEPENDS ON HOW IT'S COOKED
SMELL	ANSWERS WILL VARY	

WHICH WOULD YOU RATHER EAT? A RAW EGG OR A COOKED EGG? WHY?

COOKED - RAW EGGS ARE NOT SAFE TO EAT AND WOULD NOT TASTE OR FEEL GOOD

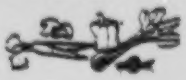
WHICH IS SAFER TO EAT? RAW EGGS OR COOKED EGGS? WHY?

COOKED - RAW EGGS COULD CONTAIN A "FOOD SPOILER" THAT WOULD MAKE YOU SICK

VEGETABLES

WHEN VEGETABLES ARE COOKED, CHANGES TAKE PLACE IN THE WAY THEY LOOK, FEEL, TASTE, AND SOUND WHEN YOU EAT THEM.

COMPARE A RAW VEGETABLE TO THE SAME VEGETABLE COOKED.



NAME OF VEGETABLE EXAMPLE: CARROT

	RAW	COOKED
COLOR	ORANGE	ORANGE
TASTE	CRUNCHY AND SWEET	STRONGER FLAVOR
FEEL	HARD	SOFT

MANY PEOPLE ENJOY VEGETABLES RAW INSTEAD OF COOKED. WHAT VEGETABLES WOULD YOU RATHER EAT RAW? EXAMPLE - CARROTS, CAULIFLOWER, SPINACH, BROCCOLI, TOMATOES, GREEN PEPPER, ETC.

NAME ANSWER KEY

TASTE AND COMPARE

DIRECTIONS: AT HOME YOU WILL BE ABLE TO TASTE FOODS BEFORE THEY ARE COOKED AND AFTER THEY ARE COOKED. USE THIS PAPER HOME AND TASTE THREE FRUITS OR VEGETABLES RAW AND COOKED.

ANSWER THE QUESTIONS ABOUT EACH ONE.

EXAMPLES

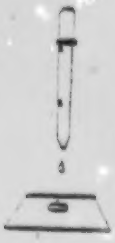
1. NAME OF THE FOOD TURNIP
HOW DOES IT LOOK RAW? WHITE AND PURPLE ON TOP
HOW DOES IT TASTE RAW? CRUNCHY AND STRONG FLAVORED
HOW WAS IT COOKED? IN SOUP
TELL HOW IT CHANGED WHEN IT WAS COOKED. TURNED SOFT AND CHEWABLE AND JUST WHITE
DO YOU LIKE IT BETTER RAW OR COOKED? RAW

2. NAME OF THE FOOD BROCCOLI
HOW DOES IT LOOK RAW? GREEN STALKS WITH GREEN FLOWERS
HOW DOES IT TASTE RAW? CRUNCHY AND MILD
HOW WAS IT COOKED? STEAMED
TELL HOW IT CHANGED WHEN IT WAS COOKED. LOST OF A CRUNCH AND NO FLAVOR CHANGE
DO YOU LIKE IT BETTER RAW OR COOKED? [illegible]

3. NAME OF THE FOOD APPLE
HOW DOES IT LOOK RAW? BRIGHT RED
HOW DOES IT TASTE RAW? CRUNCHY AND SWEET
TELL HOW IT CHANGED WHEN IT WAS COOKED. TURNED SOFT, CHEWABLE, AND WHITE
DO YOU LIKE IT BETTER RAW OR COOKED? RAW

NAME ANSWER KEY

LIFE IN A DROP OF WATER



YOU WILL NEED:

A) ONE DROP OF FISHBOWL WATER
B) A MICROSCOPE SLIDE
C) A MICROSCOPE
D) AN EYE DROPPER

DIRECTIONS:

1. TAKE A DROP OF WATER FROM A FISH TANK.
2. DROP ONE DROP OF THE WATER ON THE MICROSCOPE SLIDE.
3. EXAMINE THE SLIDE UNDER THE MICROSCOPE.
4. LIST THE LIVING THINGS THAT YOU FIND IN A DROP OF WATER.

ANSWERS WILL VARY

HERE IS WHAT YOU MIGHT SEE:

ALGAE: THE SIMPLEST PLANTS. THEY HAVE AN ARRANGEMENT OF CELLS VERY MUCH ALIKE. THEY CAN BE GREEN, BLUE-GREEN, RED, OR BROWN.

FUNGI: SIMPLE PLANTS LIKE ALGAE. THEY ARE BLACK, YELLOW, WHITE, OR BROWN. THEY LIVE ON DEAD MATERIAL.

GERMS OR BACTERIA: THE SMALLEST FUNGI. THEY LOOK LIKE FLOATING OR MOVING DOTS.

PROTOZOA: ONE-CELLED ANIMALS THAT HAVE MANY DIFFERENT SHAPES. THEY SHOOT THROUGH THE WATER.

NAME ANSWER KEY

WHY IS LACK OF FOOD A WORLD PROBLEM?

DIRECTIONS: READ PAGES 62 THROUGH 72 IN YOUR HEALTH BOOK TO ANSWER THESE QUESTIONS.

1. (PAGE 62) WHAT IS ONE REASON FOR THE LACK OF FOOD IN SOME COUNTRIES?
FARMERS DO NOT HAVE MODERN FARM EQUIPMENT

2. (PAGE 62) WHY ARE LONG, DRY SPELLS BAD FOR CROPS? KILLS THE CROPS THAT HAVE BEEN PLANTED

3. (PAGE 63) HOW DOES THE UNITED STATES HELP COUNTRIES THAT NEED MORE FOOD?
SENDS MILLIONS OF TONS OF FOOD SUCH AS DRIED MILK AND WHEAT

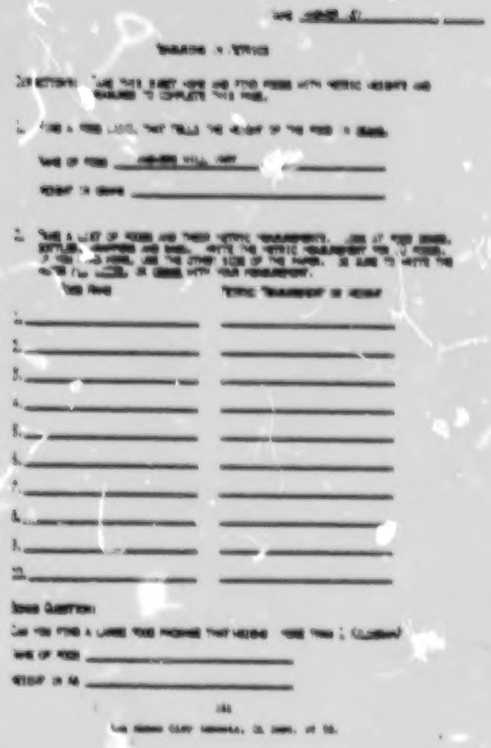
4. (PAGE 63) WHY ARE SCIENTISTS TRYING TO FIND NEW TYPES OF FOOD? TO SOLVE THE PROBLEM OF HUNGER AND LACK OF FOOD

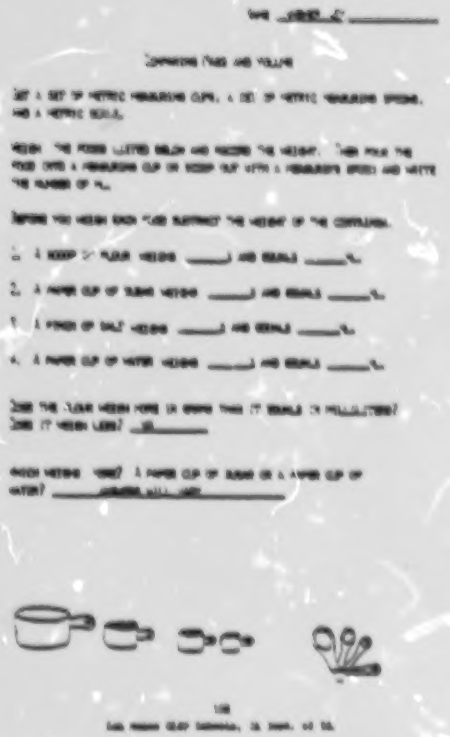
5. (PAGE 65) READ PAGE 65 AND LOOK AT THE PICTURE. WHAT ARE FOUR SOURCES OF PROTEIN SHOWN THERE?
1. SOYBEANS 3. FISH
2. SEAWEED 4. PEANUTS

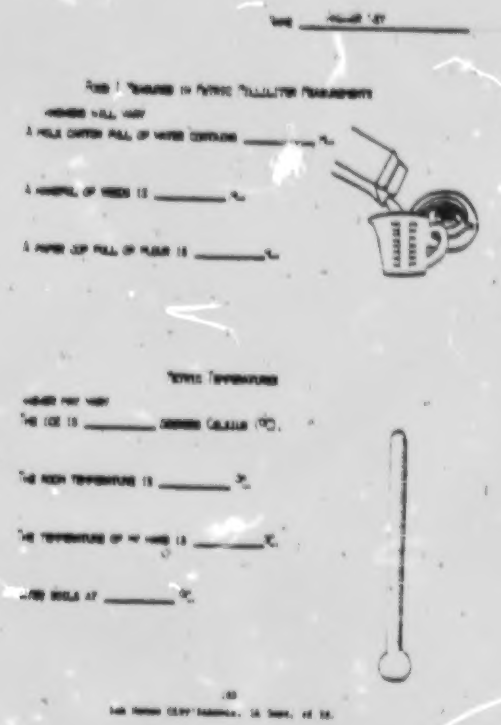
6. (PAGE 64) HOW CAN BETTER SEEDS, LIKE THE NEW RICE PLANT ON PAGE 64, HELP SOME POOR COUNTRIES GROW MORE FOOD?
A FARMER CAN GET TWO OR MORE CROPS A YEAR AS PLANT MATURES FASTER.

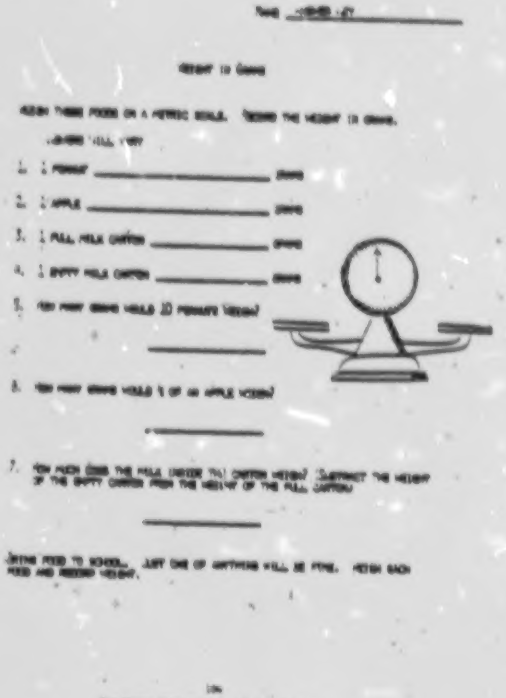
7. (PAGES 70-71) WHAT ARE THE FOOD PRODUCTS ON PAGES 70-71 MADE FROM?
[illegible]

8. (PAGE 66) WHAT IS ANOTHER WORD FOR ARTIFICIAL FOOD? SYNTHETIC









NAME ANSWER KEY

KITCHEN TOUR REPORT

YOUR KITCHEN TOUR IN A RESTAURANT OR SCHOOL KITCHEN WILL GIVE YOU AN IDEA OF HOW FOOD IS PREPARED FOR LARGE GROUPS OF PEOPLE. KEEP YOUR EYES AND EARS OPEN AND YOU CAN LEARN A LOT.

TAKE THIS REPORT FORM WITH YOU SO YOU CAN ANSWER ALL THE QUESTIONS.

1. WHICH KITCHEN DID YOU VISIT? ANSWERS WILL VARY
2. HOW MANY PEOPLE WORK IN THE KITCHEN? ____
3. WHAT ARE THEIR JOBS? ____
4. NAME THREE THINGS THAT ARE DONE FOR SAFETY.
5. NAME THREE WAYS THE FOOD AND KITCHEN ARE KEPT CLEAN.
6. WHAT IS THE TEMPERATURE OF THE FREEZER? ____
7. WHAT LARGE EQUIPMENT IS USED IN THE KITCHEN? ____
8. FIND A FOOD ON TODAY'S MENU THAT BELONGS TO EACH OF THE FOUR FOOD GROUPS. WRITE THE FOODS AND THEIR FOOD GROUPS ON THE BACK OF THIS PAPER.

SNAC

San Mateo Nutrition Activity Curriculum

"Swing Into Nutrition"

SAN MATEO CITY SCHOOL DISTRICT
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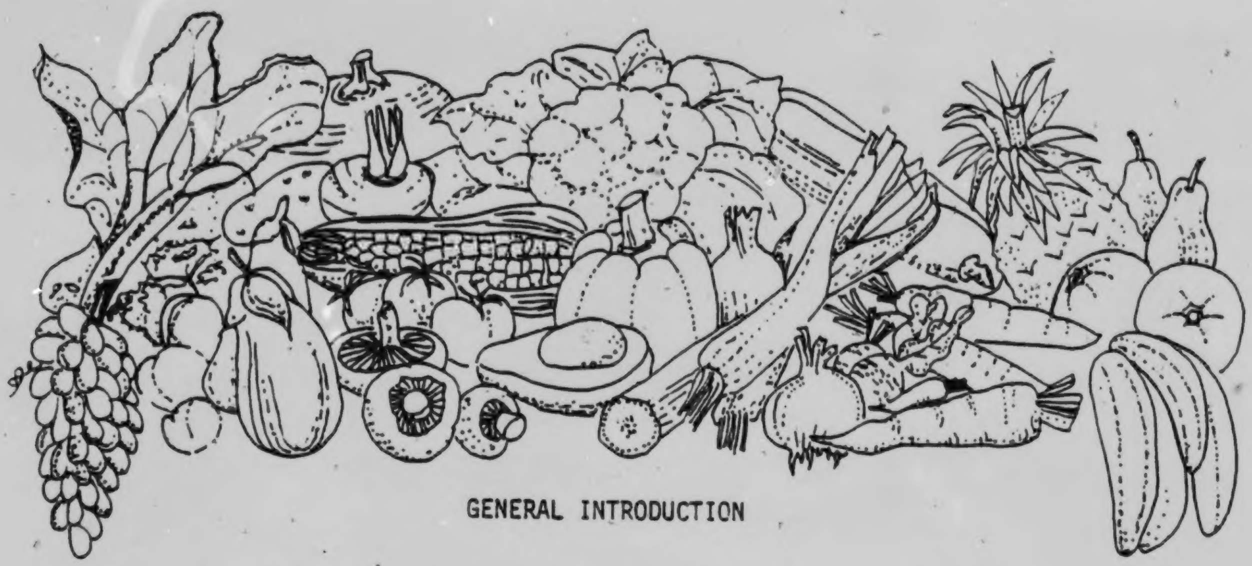
Funded 1976-80 By California State Department of Education
1975 Child Nutrition Facilities Act

January 1980
San Mateo City School District

PS 011893



GENERAL INTRODUCTION

Nutrition Education starts with you! The San Mateo City School District has designed a program in the elementary grades to integrate nutrition education into the general curriculum.

The goal of this program is to prepare elementary grade students to develop and improve healthful food habits. By the time the student leaves the elementary school, he/she should understand the relationship between food habits and well-being; should express concern that his/her food choices promote well-being; should demonstrate a willingness to taste new foods; and should be prepared to make informed decisions regarding his/her food choices. To achieve these purposes, the program focuses on the theme:

"SWING INTO NUTRITION!"

The program needs and encourages active support and involvement of students, parents, and staff members of a multicultural population. The program is based on five concepts:

(A) Food Choices and Health

(B) Factors influencing Food Choices

(C) Food Related Careers

(D) Consumer Competencies

(E) Food Safety and Sanitation

It is a multi-disciplinary curriculum in which cognitive and effective objectives in all subject areas including language arts, science, health, social studies, and math are integrated with nutrition concepts and synthesized with appropriate process goals (teaching and instructional methods). These process goals have three sources: the person, society, and the disciplines.

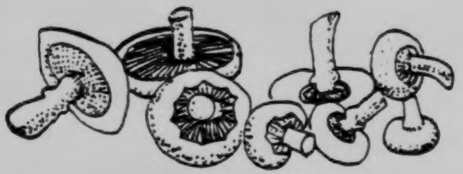
Each lesson contains directions which include behavioral and process objectives, a concept focus which is indicated by a letter in the upper left-hand corner, teacher information, materials needed or suggested, specific directions for motivation and activities, evaluation or pupil performance, and additional resources and activities. Cooking and food preparation activities are occasionally suggested. To supplement these activities, a wide collection of cookbooks and recipes are available in the Project Resource Library.

The lessons are numbered in sequence, but the teacher may rearrange the lessons to suit classroom needs and schedule. In addition to these lessons, there are ENRICHMENT lessons at the end of each Curriculum Guide to reinforce previous lessons.

All of the lessons and activities mentioned in this Curriculum Guide have been designed, tested, evaluated and articulated by Project teachers and nutritionists. They have proven effective for all participants.

Remember: The nutrition activities involving children are not only educational but fun. So join us and ......

"SWING INTO NUTRITION!"



ACKNOWLEDGEMENTS

Many, many people have helped and contributed valuable time in the development, teaching, and evaluation of the San Mateo Nutrition Education Project. The Nutrition Education Staff in San Mateo City School District wishes to acknowledge and thank these persons for their special achievements.

Food Service Director	Carvill Veech (Project Director 1976-79)
Nutrition Education Aide	Lenore Hicks
The Board of Education	Donald Hill Sue Lempert Albert Di Matteo Robert Braun Jeanne Schlueter
All Project K-5 Teachers	Laurel School North Shoreview School
Project Principals	Warren Kofler Charles Moorer
Graphic Artists	Brooke Travers William Kirk David Moore

AND

School Food Service staff members, parents, school nurses, the Project Evaluator Howard Wolff, Ph.D., Special Curriculum Consultant Anna Nuernberger, and Nutrition Education secretarial staff, especially Althea Jocz and Barbara Harris.

SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

(SNAC)

"SWING INTO NUTRITION!"

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Worksheet Answer Keys . . . . 75 - 80

SAN MATEO CITY SCHOOLS NUTRITION EDUCATION PROJECT

CURRICULUM GUIDE

Fifth Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
1	Digestion: The Fantastic Voyage	To identify and investigate the major organs of digestion.	A	Science	1
	"Fantastic Voyage" *Information and Worksheet (fill-in)*	To locate and identify the sequential steps in digestion.	A	Science	3
2	Would You Eat Blue Apples? How Our Senses Influence Food Choices	To review the five sense organs and how they influence food choices.	B	Health Science	5
	"Nutrition And The Senses" *Information sheet*	To identify how our senses are used.	B	Health Science	8
3	Calories: Energy In Food	To identify the concept of calories as a measurement of heat energy in food.	A	Health	9
	"Calorie Counting"	To define calories and determine the number needed per day.	A	Health	11
	"3-2-4-4 Menu" *Worksheet (fill-in)*	To write a menu fulfilling the 3-2-4-4 requirement.	A	Health Language Arts	12
	"Comparison Graphs" *Information sheets*	To illustrate the nutrients in various foods.	A	Health	13
4	Type A Lunch Menu Contest	To plan a Type A lunch menu.	A	Health	16
	"Lunch Menu Contest" *Worksheet (fill-in)*	To write a Type A menu fulfilling the requirements	A	Health Language Arts	18
5	You Can Help School Lunch	To identify how one can have an influence on school lunch menus and lunchroom atmosphere.	A	Health	19
6	Energy For Life Food Chains	To describe the process by which green plants produce food.	D	Science	21

CURRICULUM GUIDE

Fifth Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PLAN
	"Energy For Life" *Information sheet*	To explain how plants produce food.	D	Science	24
	"Energy For Life Self Test" *Worksheet (fill-in)*	To demonstrate food chains and further describe food energy.	D	Science Art	26
	"Food Chains" *Information sheet*	To review food chains.	D	Science	27
	"Photosynthesis" *Information sheet*	To illustrate the process of photosynthesis.	D	Science Art	28
7	Food Jobs In The Citrus Industry	To develop an understanding of food production and distribution.	C	Social Studies	29
	"Food Career Crossword Puzzle" *Puzzle*	To choose appropriate words concerning food-related careers.	C	Social Studies Art	31
	"Food Careers" *Worksheet (fill-in)*	To identify job titles with the description of the job.	C	Social Studies	32
	"Glossary of Different Food Careers" *Information sheet*	To define food careers.	C	Social Studies	33
8	Nutrition In A Can? Labels! Labels!	To describe the function of a nutritional food label.	D	Math Health	34
	"Cereal Labels" *Worksheet (fill-in)*	To observe nutrition labels on canned and packaged foods.	D	Health Math	36
	"Read The Label: *Worksheet (fill-in)*	To observe nutrition labels on canned and packaged foods.	D	Health Math	37
9	Around The World With Food	To recognize cultural differences in food choices and eating styles.	A,B	Social Studies	39
	"Around The World With Food" *Information sheets*	To describe eating styles and utensils used by different cultures.	A,B	Social Studies	41

CURRICULUM GUIDE

Fifth Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVES	CONCEPTS	SUBJECT AREA	PAGE
	"Around The World With Food Activity Sheet" *Worksheet (fill-in)*	To identify foods that are eaten using different utensils.	A,B	Social Studies	45
	"Around The World With Food Recipes" *Recipes*	To practice preparation of cultural foods using proper sanitation techniques.	A,B	Social Studies Health	46
10	What's Added To The Food I Eat? Enriched and Fortified Foods ENRICHMENT	To identify reasons for enrichment and fortification of food.	D	Health Reading	48
	"What Is Added" *Worksheet (fill-in)*	To examine food labels for fortification and enrichment.	D	Health Reading	50
11	Junk Food Junkie vs. Superrat: Animal Feeding Experiments ENRICHMENT	To observe and compare growth of rats fed nutritious and non-nutritious diets.	A	Health Science Math	51
	"Rat Experiment Record Sheet: *Record sheet*	To record data on rat experiment.	A	Science Math	53
	"Teaching Nutrition The 'Rat' Way" *Information sheets*	To review rat experiments.	A	Science	54
12	What Do Vegetarians Eat?" ENRICHMENT	To define and describe vegetarianism.	B,D	Health Social Studies Science	57
	"What's A Vegetarian?" *Worksheet (fill-in)*	To identify what vegetarians eat.	B,D	Health	59
	"Vegetarianism In A Nutshell" *Worksheet (fill-in)*	To plan a vegetarian meal with all four food groups.	B,D	Health Language Arts	60

CURRICULUM GUIDE

Fifth Grade

LESSON PLAN NUMBER	LESSON PLAN TITLE AND ACTIVITIES	LESSON OBJECTIVE	CONCEPTS	SUBJECT AREA	PAGE
13	How Can You Help? Food Waste ENRICHMENT	To identify examples of food waste and ways to reduce it.	D	Math Social Studies	61
	"What's Wrong With Wasting Food?" *Worksheet (fill in)*	To figure cost of food waste and waste of good nutrition.	D	Math Health	63
14	You And Your 5 Senses ENRICHMENT	To identify the role of the five senses in the identification of food.	B	Science	64
	"Food And Your Senses" *Information sheet*	To describe how the senses influence food choices.	B	Science	67
	"Your Sense of Tas[illegible] *Worksheet (fill in[illegible]*	To identify where different taste sensations are found on the tongue	B	Science Language Arts	68
	"What A Team We Make" *Worksheet (fill in)*	To illustrate how taste and smell work together.	B	Science Language Arts	69
	"Your Nose Knows" *Worksheet (fill in)*	To examine different smells.	B	Science Language Arts	70
	"Sense Of Touch" *Worksheet (fill in)*	To identify and describe the feel of different foods.	B	Science Language Arts	71
	"Sense of Hearing" *Worksheet (fill in)*	To describe sounds heard around you.	B	Science Language Arts	72
	"Sense of Sight" *Worksheet (fill in)*	To illustrate how sight can help determine what you eat.	B	Science Language Arts	73
	"Use Your Five Senses" *Activity Center layout*	To illustrate and identify a food by using the 5 senses of seeing, smell, touch, taste and hearing.	B	Language Arts	74

Concept A

Fifth Grade
Subject Area: Science

DIGESTION:
THE FANTASTIC VOYAGE

Behavioral Objective: Following an investigation of the major steps of digestion, the student will correctly sequence the five major organs of digestion.

Process Objective: Labeling, categorizing, explaining.

Teacher Information: Digestion of food proceeds systematically and takes about 3-4 hours. Saliva in the mouth breaks down starch to sugar. Protein digestion begins in the stomach. Most fat and protein digestion goes on in the small intestine. Water is essential to carry nutrients to the blood cells. Vitamins are not digested but rather act as part of the enzymes in body systems. Minerals are needed for proper body function but are not broken apart during digestion. Iron and Calcium become part of the cells. Energy released from the digestion of carbohydrate, fat, and protein is expressed as calories. Related science experiments that are recommended to enhance the students understanding of the complex value of digestion.

Materials: "Fantastic Voyage" (2 pages) - 1 per student
Filmstrip: "How Food Becomes Part of You" - Large Digestive System poster - Guidance Associates (Project SNAC)

Demonstration Material:
1. 2 glasses, 2 sugar cubes.
2. Plastic straw, cracker.
3. Newspaper squares, vaseline.
4. 6 meters of string, glue, paper.
5. Salt, glass, paper towel, water

Vocabulary: Digestion, saliva, intestine, esophagus, enzyme

ACTIVITY

Motivation:

Find out what the students know about food digestion through discussion. Explain that the class will explore the digestive process. Display the digestive system poster. Show filmstrip "How Food Becomes Part of You."

Development:

1. Give a Fantastic Voyage log to each student. Discuss log together as a class, pointing out each step on the digestion poster.

2. Recommended experiments relating to the steps of digestion which can be done as demonstration by teacher or students to illustrate the log.

   a. Mouth - One way to illustrate the need of breaking down food

Development (continued)

before it can be used by the body is to put a sugar cube in glass of water and another sugar cube (crushed) in glass of water - which dissolved first?

b. Esophagus - To illustrate how the esophagus works, put some wet cracker in a straw. Squeeze the straw from top to bottom to move food through.

c. Stomach - The hydrochloric acid in the stomach will dissolve meat, but it will not hurt your stomach.
To illustrate this, take a small piece of newspaper and sprinkle water on one side to show that it soaks through.
Smear some vaseline over one side of another piece of newspaper, sprinkle water on the vaseline side - water will not soak through. The stomach is lined with mucous to protect it from the acid.

d. Small intestine - Measure 6 meters of string and stretch it across the room. Coil string and glue it on a piece of paper to illustrate how it fits inside of a person.

e. Absorption into blood stream - Make a cone with a paper towel. Put salt inside. Place cone of salt in glass of water. The water will taste salty after a while. How does the salt get into the water? Through the paper towel. The paper towel is like the wall of the small intestine.

Evaluation:

Have students label the diagram of the digestive tract so that it explains the steps in their correct sequence.

Additional Resources:

Books: How Your Body Uses Food, National Dairy Council

The How and Why Wonder Book of the Human Body, Gosset and Dunlap

The Food You Eat, Marr

NAME ______________________________

FANTASTIC VOYAGE

YOUR MOUTH

DIGESTION IN THE MOUTH CONSISTS MAINLY OF BREAKING DOWN FOOD SO IT CAN BE USED BY THE BODY. HOW DO WE DO THIS? ______________________________ SALIVA ALSO CONTAINS AN ENZYME WHICH BEGINS TO BREAK DOWN STARCH. WHAT IS YOUR TONGUE FOR? ______________________________

YOUR FOOD TUBE

FOOD TRAVELS THROUGH A TUBE FROM YOUR MOUTH TO YOUR STOMACH. THIS TUBE IS CALLED THE ESOPHAGUS (E-SŎF-A-GUS). WRITE "ESOPHAGUS" ON THE DIGESTIVE SYSTEM DIAGRAM. THE ESOPHAGUS USES MUSCLES TO SQUEEZE THE FOOD TO YOUR STOMACH. ONE NAME FOR THE MUSCLE SQUEEZING IS "PERISTALSIS."

YOUR STOMACH

DO YOU KNOW WHERE YOUR STOMACH IS? IT IS JUST ABOVE YOUR WAIST. YOUR STOMACH IS LIKE A SACK MADE OF MUSCLES. THE MUSCLES SQUEEZE THE FOOD UNTIL IT IS BROKEN APART. SPECIAL JUICES CALLED "ENZYMES" AND HYDROCHLORIC ACID IN THE STOMACH BREAK THE FOODS APART EVEN FURTHER SO IT CAN TRAVEL ON TO YOUR SMALL INTESTINE. A FAVORITE SOUP IN MEXICO IS MADE WITH THE LINING OF A COW'S STOMACH WHICH IS CALLED "TRIPE." ASK YOUR BUTCHER IF YOU CAN SEE SOME TRIPE.

YOUR SMALL INTESTINE

YOUR SMALL INTESTINE IS A LONG, SKINNY TUBE, ABOUT 20 FEET LONG, THAT IS ALL COILED UP. MOST OF THE DIGESTION HAPPENS IN YOUR SMALL INTESTINE. FOOD IS ABOSRBED FROM THE SMALL INTESTINE INTO YOUR BLOOD STREAM SO THAT IT CAN BE CARRIED TO THE REST OF YOUR BODY. WHAT OTHER THINGS DOES YOUR BLOOD CARRY? ______________________________

San Mateo City Schools, CA Dept. of Ed.

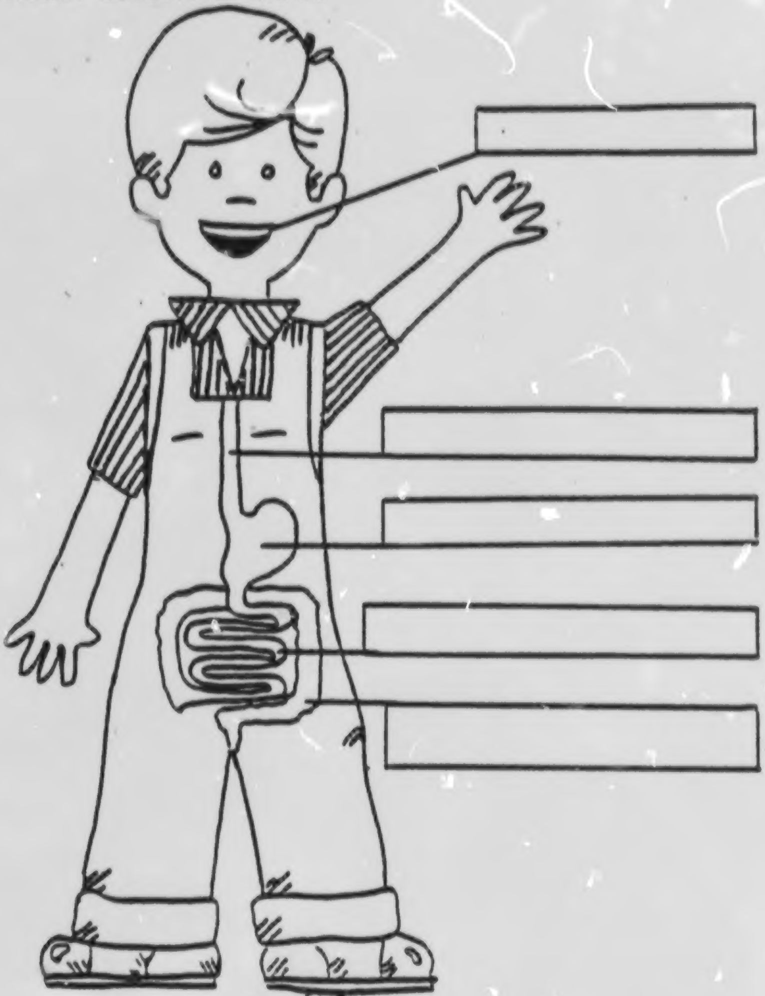
YOUR LARGE INTESTINE

YOUR LARGE INTESTINE IS YOUR FOODS' LAST STOP ON ITS FANTASTIC VOYAGE. WHAT DOES YOUR LARGE INTESTINE DO?

____

____

BELOW IS A DIAGRAM OF THE DIGESTIVE TRACT. FILL IN THE BLANKS WITH THE NAME OF THE CORRECT DIGESTIVE ORGAN.



San Mateo City Schools, CA Dept. of Ed.

Concept B

Fifth Grade
Subject Area: Health
Science

2

WOULD YOU EAT BLUE APPLES?
(How our senses influence food choices.)

Behavioral Objective: The student will recall the five sense organs and their functions.
The student will test how our senses influence food choices.

Process Objective: Open mindedness with respect to new ideas and situations of conflict, understanding the factors that shape human behavior, receptively to unfamiliar experience.

Teacher Information: The five main sense organs--eyes, ears, nose, tongue, and skin--pass information along to the brain. This information is useful in deciding whether or not an item is a food and whether or not it is good to eat. The five senses, sight, smell, taste, touch, and hearing, play a large role in determining the food choices people make. Much of what is learned through experience is transferred to new, unfamiliar items.
This series of activities will give students an opportunity to explore their reactions to foods. Through an understanding of how senses enhance or detract from our enjoyment of foods, students can learn to evaluate preformed notions about foods.

Materials: Blue food color
Food items
  2 containers of applesauce--one regular, one blue
  Fruit
  Bread
  Vegetables
  Dried Beans
Spoons
Paper Cups
Magazines
Scissors

Vocabulary: Reaction, appeal, senses, sight, smell, taste, sound, feel

ACTIVITY

Motivation:

Show the blue food to the class first. Give students a chance to discuss what flavor the blue food is. What made the food blue? Do they want to taste it? Show the regular colored food. How will the foods taste--the same or different? Is there a difference in the smell?

Development:

1. Lead a discussion of the five primary senses and their functions. What are the five major sense organs called?

Development (continued)

5 Primary Senses	Organs
Sight	Eyes
Taste	Tongue
Smell	Nose
Sound	Ears
Feel	Fingers and Tongue

2. Colorful Meals

Discuss the colors of foods found in the Four Food Groups: Milk, meat, vegetable-fruit, bread-cereal. Plan a menu of foods of one color or texture. Then plan a balanced menu with a variety of textures and color. Discuss and compare appeal to the senses of each meal.

3. Sense of Taste and Smell Together

Our mouth can only distinguish four taste sensations--bitter, sweet, sour and salty. It is our sense of smell together with the sense of taste that determines the flavor of a food.

Suggested Experiments (choose one)

a. Have students hold their noses and taste a mint. Then take fingers away from their noses--what happens?

b. Blindfold a student and have him/her taste a piece of apple and piece of potato while holding their nose. Can the student distinguish between the two foods if he/she cannot smell them?

4. Sense of Touch Reactions:

Place a collection of food samples on the table. Give the class an opportunity to examine the foods--shape, smell, color, size, texture. Blindfold 4 or 5 children at one time. Have other children rearrange placement of the foods on the table. Ask each blindfolded child to pick up one item and to try to identify it. Ask them what clues they used to identify the foods picked. What senses did they use to discover the clues?

5. Sense of Sound

Have students suggest a list of words to describe how foods sound when eaten or while being prepared/cooked; e.g. crunch, sizzle, pop, fizz.

Evaluation:

Write a story about your favorite meal. Describe each food in it, and its appeal to each of the five senses.

Additional Activities:

1. To further illustrate sense of taste, provide the students with flat toothpicks and 3 glasses filled with sugar water, salt water, and vinegar. Have the students taste the liquids on different parts of their tongue by placing a toothpick in each liquid and then touching it on their tongue. Ask them what part of their tongue do they taste each (sweet, sour, salty).

2. To reinforce concept of color as a factor in food choices, use two clear containers of orange juice. Add green food coloring to one. Before presenting either to the students, select one to be the "taste tester". Send the "taste tester" out of the class while the rest of the class speculates on the taste reaction to the two foods. Assure the blindfolded students that both foods will be the same and to ignore student reaction. If possible, record student reaction on tape for later discussion. Then let the class taste both foods.

Additional Materials:

Tape recorder/cassette
Polaroid camera

NUTRITION AND THE SENSES
(Back-up page for Would You Eat Blue Apples?)

Food and Senses

No matter how nutritious a food may be, there is little chance it will be consumed if it does not pass the tests of the senses. In some cases, such repeated rejections of food could ultimately lead to poor health.

When we sample a food, it must appeal to the sense of taste, or it is likely to be rejected. More than that, if the commodity does not first appeal to some other senses, it may never reach the taste test. Does it look good? Does it smell tasty? Does it "feel" the way you would expect this food to feel? Some specific aspects of how we use our senses to judge the acceptability of food have been identified as follows:

Vision - sight, appearance (color and color contrasts, shape, size, texture). The visual determinants of food acceptance include the natural appearance of food as well as a good mixture of visual qualities. For example, a plate of food that has some soft and some hard food, in more than one color, is likely to be accepted more readily than a plate of soft foods in one color, and many is the time a sprig of parsley has broken the monotony.

Touch - pain, temperature, pressure (hot, cold, texture: chewiness, fibrousness, limpness, dryness, moistness, stickiness, oiliness).

Taste - sweet, sour, bitter, salty.

Sound - sounds of eating (crunchiness, crackliness, crispness); sounds of selection (as determined by agitation, such as shaking cans to determine fullness); sounds of preparing food and cooking (popping, snapping, perking, frying, bubbling, cracking, chopping)

Smell - odor, fragrance (spicy, floral, fruity, nutty, greasy, burned, oily, fishy, minty, rancid, heavy, woody).

Factors of taste and smell are generally the joint determinants of flavor.

Concept A

Fifth Grade
Subject Area: Health

CALORIES: ENERGY IN FOOD

Behavioral Objective: The student will define calories as "food energy" and identify low and high calorie (energy) foods.

Process Objective: Commitment to the inductive and deductive methods of verifying knowledge and testing value; differentiating, categorizing.

Teacher Information: This lesson introduces the concept of calories as a measurement of the heat and energy potential of a food. It also relates and distinguishes the nutritional from the caloric values of foods. A simple demonstration and comparison of the length of time taken for two foods to burn make the concept tangible.

Materials:
Student worksheets, "Calorie Counting", "3-2-4-4 menu"
Class set of Mr. Peanuts' Guide to Nutrition booklets (Project SNAC)
"Comparison Cards" from National Dairy Council (Project SNAC)
Experimenting with Calories,
clay, peanut, paper clip, spoon, hot pad, sugar

Vocabulary: comparison cards, calories, energy, carbohydrates

ACTIVITY

Motivation:

Discuss the following: Where do we get energy? What is the word we use to describe how much energy a food will give us. What happens when we eat too much? Too little?

Development:

Give each student (or group) a copy of Mr. Peanuts' Guide to Nutrition booklet and the 3 different worksheets. Have students complete the student worksheets individually or in groups of 4-5, by referring to the booklet.

Show the Comparison Cards for food which are high and low calorie and high and low nutrient. Explain the graph and the relationship of the calorie bar to nutrient bars. Students can investigate the Comparison Cards independently to select high nutrient-low calorie cards which would be good for weight control and foods which would contribute to weight gain.

To demonstrate the different amount of heat, energy, or calories a food contains, burn a peanut (high in fat) and white sugar (high in carbohydrates). Weigh and record the weight of a peanut. Impale it with the sharp end of a paper clip and set the bent end in a ball of clay or rubber eraser on a fireproof surface. Record the time it takes to burn out. Weigh an equal amount of sugar and put it in a long handled spoon. Hold the end of the spoon with a hot pad and ignite that spoon over a can of sterno. (Teacher holds spoon--students stand away). Record the time it takes to burn. Discuss why peanut takes longer (more fat, more calories). Discuss high fat foods and high carbohydrate foods. Which is good for fast and which is good for long term energy?

Compare quantities of nutrients in the calories on Comparison Cards.

Evaluation:

Ask students to define "calorie" and name three high calorie foods and three low calorie foods.

Additional Resources:

16mm film, "Foods, Energy, and You", (available from County IMC).
"What's Good to Eat" (County IMC).

NAME ______________________________

CALORIE COUNTING

1. LOOK UP THE WORD CALORIE AND WRITE THE DEFINITION. USE THE RESOURCE BOOKLETS.

2. FIND OUT HOW MANY CALORIES YOUR BODY NEEDS EVERY DAY. LOOK ON PAGE 18 OF MR. PEANUT'S GUIDE. WRITE IT HERE.

NOW YOU CAN PLAN A DAY'S FOODS THAT WILL GIVE YOU THE AMOUNT OF CALORIES, OR FOOD ENERGY, THAT YOUR BODY NEEDS EVERY DAY.

TO PLAN YOU DAY'S FOOD, BE SURE TO CHOOSE A 3-2-4-4 MENU. THAT MEANS:

3 SERVINGS - MILK GROUP

2 SERVINGS - MEAT GROUP

4 SERVINGS - VEGETABLE-FRUIT GROUP

4 SERVINGS - BREAD-CEREAL GROUP

PAGE 18-19 OF MR. PEANUT'S GUIDE IS A CALORIE CHART.

NAME ____________________

3-2-4-4 MENU

BREAKFAST FOODS

____

____

____

____

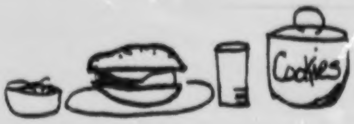
LUNCH FOODS

____

____

____

____



DINNER FOODS

____

____

____

____

SNACKS

____

____

PLANTERS
PEANUTS

CHECK YOUR MENU. IS IT A 3-2-4-4 DAY? ____________________

WHAT IS THE TOTAL CALORIES? ____________________

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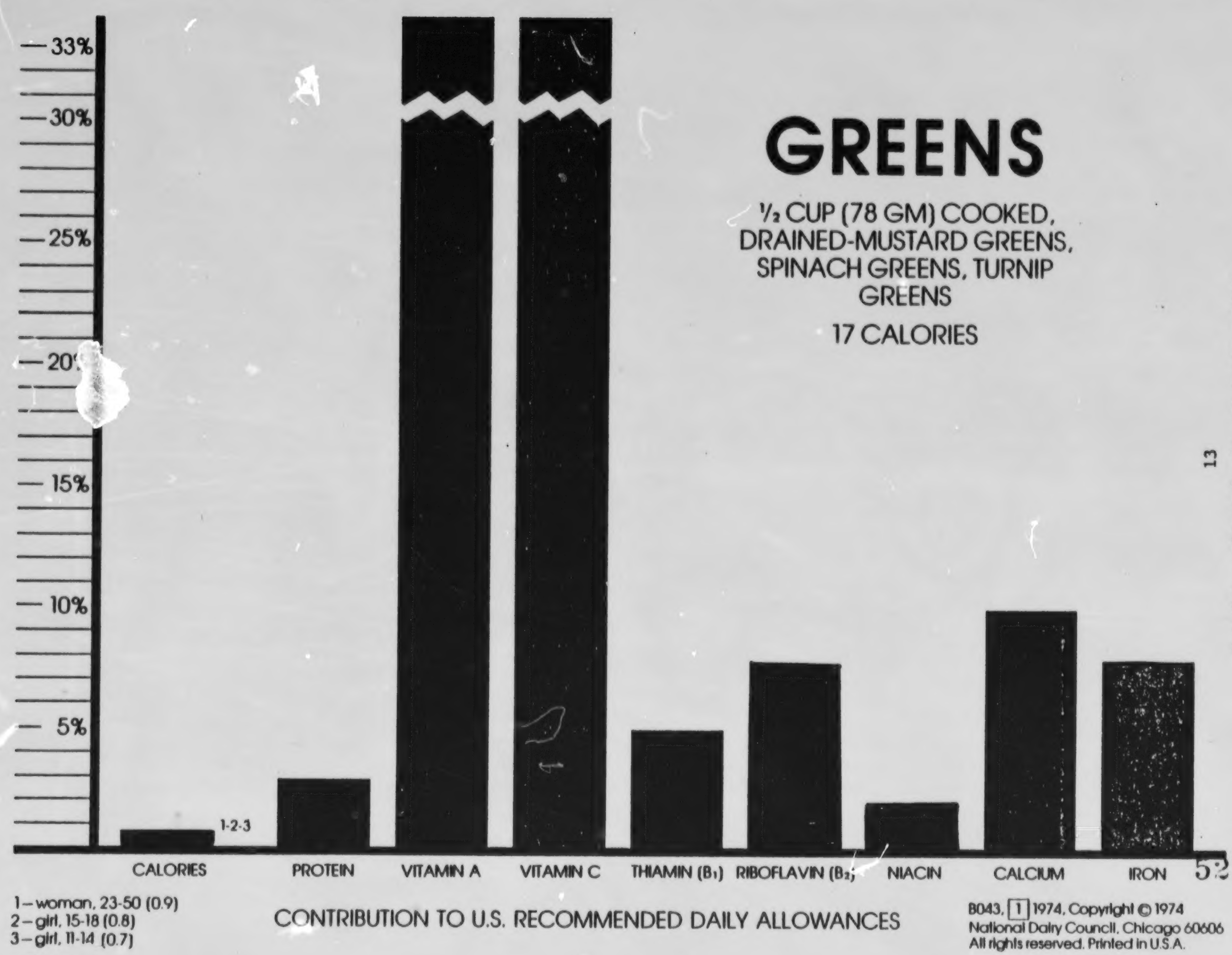
GREENS

½ CUP (78 GM) COOKED, DRAINED-MUSTARD GREENS, SPINACH GREENS, TURNIP GREENS

17 CALORIES



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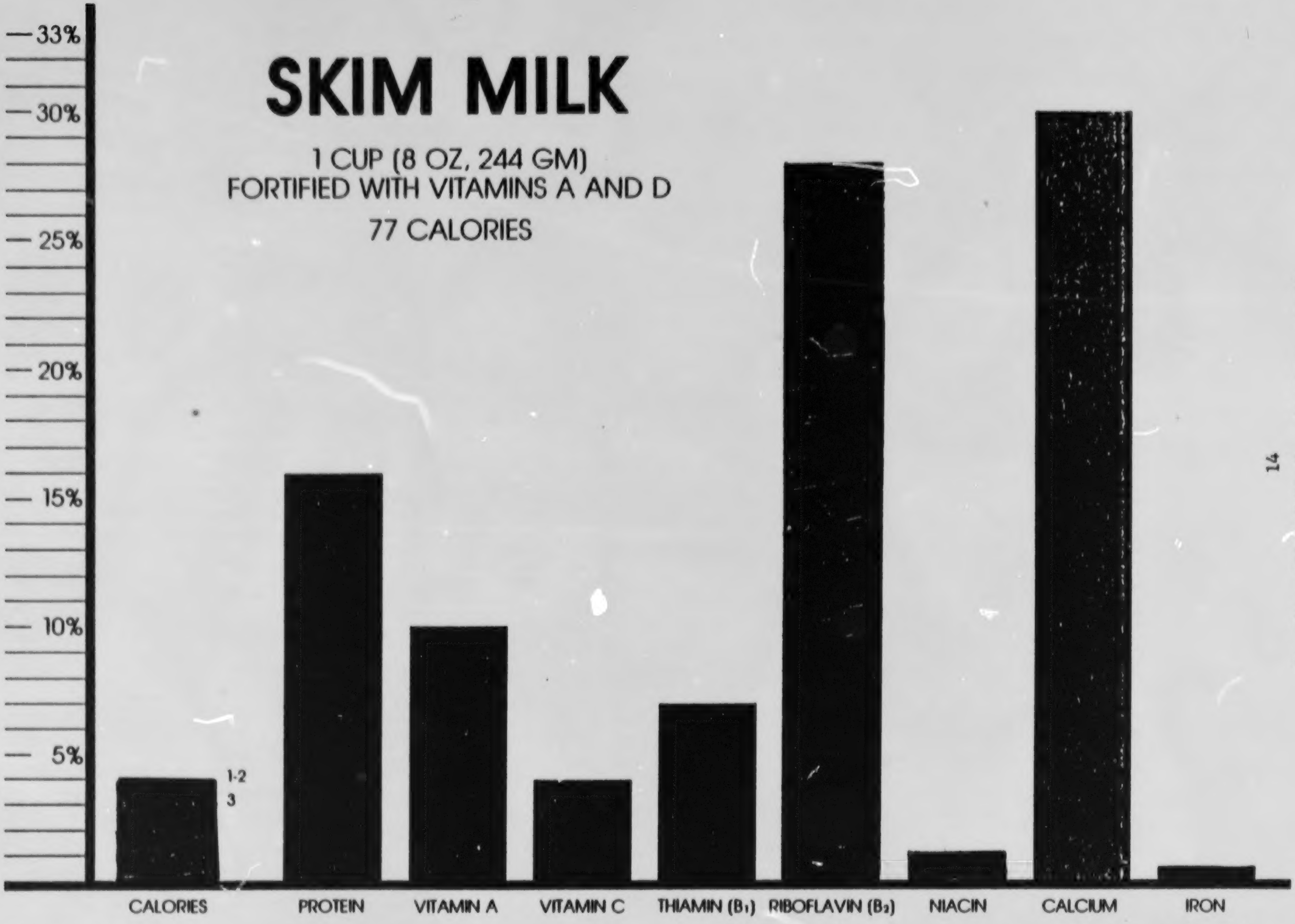
SKIM MILK

1 CUP (8 OZ, 244 GM)
FORTIFIED WITH VITAMINS A AND D
77 CALORIES



CONTRIBUTION TO U.S. RECOMMENDED DAILY ALLOWANCES

1—woman, 23-50
2—girl, 15-18
3—girl, 11-14

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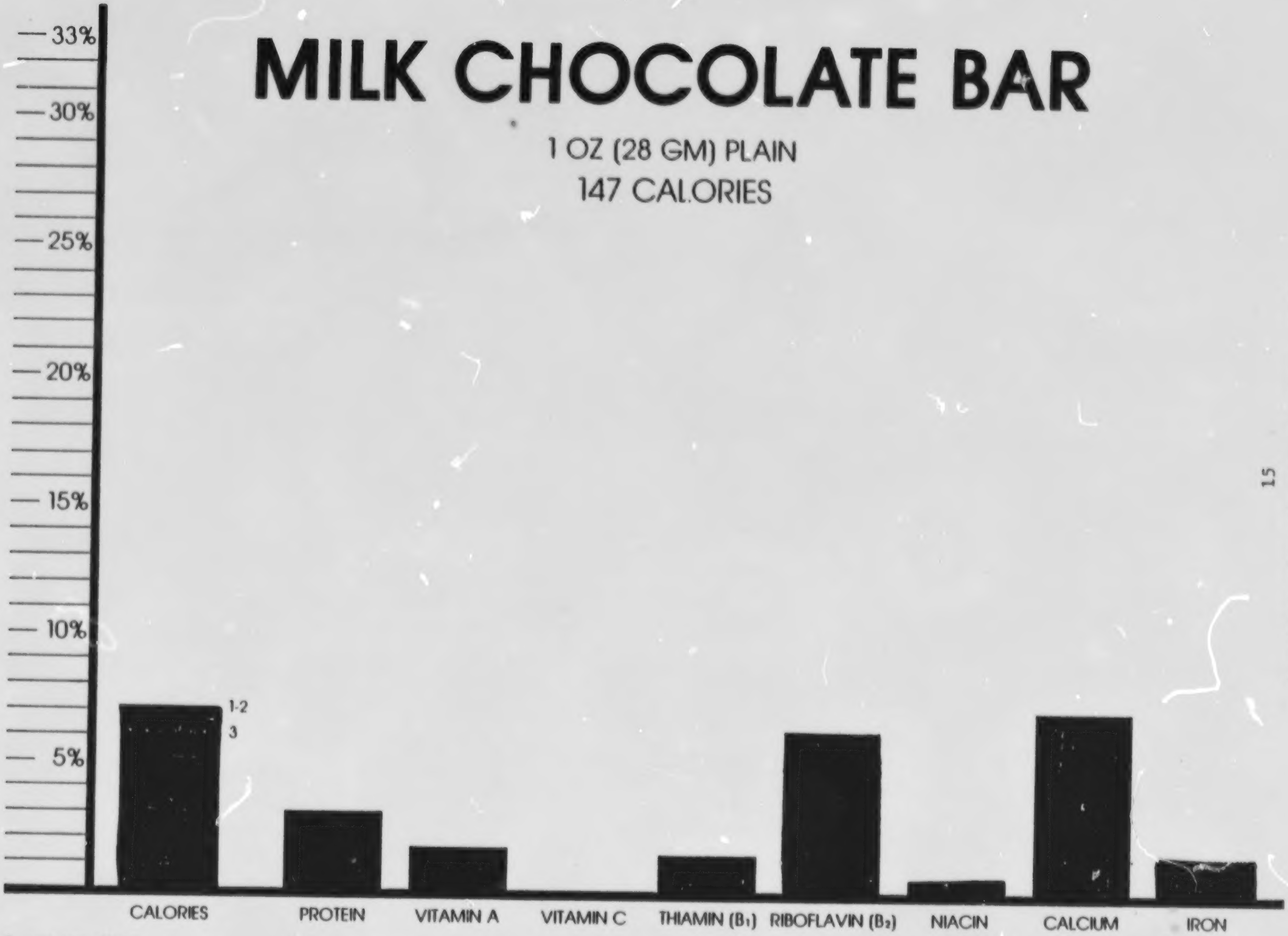
MILK CHOCOLATE BAR

1 OZ (28 GM) PLAIN
147 CALORIES



1 – woman, 23-50
2 – girl, 15-18
3 – girl, 11-14

CONTRIBUTION TO U.S. RECOMMENDED DAILY ALLOWANCES

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TYPE A LUNCH MENU CONTEST

Behavioral Objective: The student will plan a balanced lunch menu. (Type A). The student will state one or more ways the school lunch contributes to health.

Process Objective: Skill in engaging in the processes of observing, inferring, valuing; extrapolating.

Teacher Information: The school lunch menu contest is a good way to get students involved in menu planning. Writing a Type A Menu requires prior knowledge of food groups since each Type A Lunch must contain all four basic food groups. By discussing the school lunch for three days prior to the actual menu writing, each child should be able to plan a meal with all five parts. (see below)

The Type A Lunch provides approximately 1/3 of the Recommended Dietary Allowances for one day.

Materials: "Lunch Menu Contest" entry forms
School Menu

Vocabulary: Type A Lunch, high protein, carbohydrate, calcium

ACTIVITY

Motivation:

Week prior to contest:

Explain that a lunch menu contest will be held. Ask students to start thinking of a lunch menu they would like to enter in the contest, expecially one that is cultural.

Development:

A) Introduce the 5 Type A Lunch components:
   1. Meat or high protein dish
   2. Bread or roll
   3. Vegetable - raw or cooked
   4. Fruit
   5. Milk to drink

B) Each day for at least two days, compare the lunch menu with the Type A components. Compare to the Four Food Groups and discuss what the major body function of each food is, for example:

1. Meat/Protein - Protein for growth
   Iron for blood
2. Bread/Roll - Carbohydrate for energy
3. Vegetable - Vitamin C for healthy gum

4. Fruit - Vitamin A for eyes
5. Milk to drink- Calcium for teeth and bones
Protein for growth

Menu Contest Day

Review Type A lunch components.
Students complete "Lunch Menu Contest" entry forms
Collect forms and return to nutrition project cordinator.

Evaluation:

1. Check menus for the inclusion of food in each category.
2. Have each student write a paragraph describing one or more ways the Type A school lunch contributes to health.

Additional Resource:

"Pizza Palace" - slide tape show available from Nutrition Project.

Describes the Type A lunch from start to finish. Prepared by 5th grade class.

NAME ____________________

LUNCH MENU CONTEST

RULES: WRITE A "TYPE A" LUNCH MENU THAT HAS ALL THESE PARTS:

1. MAIN DISH (MEAT-PROTEIN)
2. VEGETABLE (RAW OR COOKED)
3. BREAD OR ROLL
4. FRUIT
5. CARTON OF MILK

IF YOUR MAIN DISH IS A SANDWICH, BURGER OR PIZZA, THE BREAD IS PART OF THE MAIN DISH.

MY MENU

DOES YOUR MENU HAVE THE FIVE PARTS?

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YOU CAN HELP
School Lunch

Behavioral Objective: The student will state one way he/she can have an influence on the school lunch menus served; and one or more ways he/she can improve the appearance and atmosphere of the lunchroom.

Process Objective: Skill in engaging in the processes of observing, inferring, valuing; extrapolating.

Materials: Poster board or materials for decorations

Vocabulary: School lunchroom, appearance, atmosphere

ACTIVITY

PART I

Motivation:

Explain to students that the school lunch program is provided for them so that they can have a pleasant place to eat. Also, that the lunch program tries to make the food enjoyable as well as good for them. (Refer to Type A menus from previous lesson.) The people involved in the school lunch program would like the students help in improving these conditions whenever the students can. Ask the students "How can you help improve the school lunchroom itself?"

Development:

1. Make a list on the board of suggestions made by students on ways they could improve the appearance and atmosphere of the school lunchroom. (Possible suggestions might be decorations for holidays, posters, use of good manners, neatness, etc.) Discuss suggestions together.
2. Take on a class project for providing posters or decorations for bulletin board in school lunchroom each month or for holidays during the school year, using subjects related to good food and good manners.

PART II

Motivation:

Ask the student "How can you have an influence on the menus served on the school lunch?"

Development:

1. Have students make a list of suggestions for changes in school lunch menus served (foods they would like to have if possible, foods they do

not like, the way the food is served (raw, cooked), type of dressing on salads.
Explain that there are certain limitations to what can be served depending on expense, availability, preparation that is required, storage, etc.
Also remind them that the foods on the menu must follow the Type A lunch requirements from each of the Four Food Groups.

2. Have class as a whole (or each student) write a letter to the Food Service Director explaining their suggestions. This is the only way their ideas can be made known so that possible changes can be made.

Evaluation:

Have students state or write how he/she can have an influence on the school lunch menu and can also improve the appearance and atmosphere of the school lunchroom area.

ENERGY FOR LIFE
Food Chains

6

Behavioral Objective: The student will describe the process by which green plants produce food. The student will give an example of a food chain.

Process Objective: Skill in engaging in the process of observing, inferring; acquaintance with the development of scientific method and major theories; skill in applying a frame of reference to the study of human life and its environment.

Teacher Information: Green plants produce their own food by photosynthesis. They store the food in the roots, stems, fruit, or seeds in the form of sugar or starch. All food chains start with green plants. This lesson explores the food chain beginning with the sun. The food chain is frequently interrupted by ecological events such as pollution, weather, pesticides, and overpopulation. These can be explored in more depth if desired.

Materials: Filmstrips: "What is Food" Guidance Associates (Project SNAC)
"Photosynthesis" from Plant Structures and Growth Series, Scott, 21 minutes (Project SNAC)

Experiments: Wheat Berry Experiment
4 oz. wheat berries
soil
2 containers (eg. tin plates, milk cartons)
1 large paper bag

"Energy for Life" booklet (2 pages) - 1 per student
"Energy for Life Self Test" student worksheet
"Food Chains" and "Photosynthesis" student worksheets

Vocabulary: food chain, food web, photosynthesis, glucose, starch

ACTIVITY

Preparation:

Gather materials (wheat berries, soil, 2 containers, 2 paper bags)

Make one copy of Energy for Life booklet for each student.

Motivation:

Show the filmstrip "What is Food?". The filmstrip shows the interdependence of all life forms and that animals and plants are made of basic chemical compounds called nutrients. Explain photosynthesis, food chains, and food webs. To reinforce the filmstrip give each student a copy of the worksheets "Food Chains" and "Photosynthesis." After the filmstrip have students write a food chain that they are a part of.

Development:

1. Investigate the role of sunlight in the life of a green plant by doing this experiment.

   a) Divide the class into two groups. Each group will report on one part of the experiment.

   b) Give each group leader 2 ounces of wheat berries, a jar, and some water. Soak the wheat berries overnight to soften the outer protective coating.

   c) Plant the soaked wheat berries one-fourth inch deep in 2 containers. Water each container.

      Container A - put in a sunny place
      Container B - put inside the paper bag. Do not remove the paper bag except to water the seeds.

   d) Seeds will grow quickly. Without light the seeds will produce yellow sprouts which will not turn green. The sprouts will die eventually because photosynthesis, the manufacture of food for the plant, cannot take place in the absence of sunlight.

   e) Have each student write a description of what happened and why.

2. Have students read the "Energy for Life" booklet and complete the "Energy for Life Self Test."

Evaluation:

1. Review student responses to the "Energy for Life Self Test."

2. Have each student design a food chain beginning with the sun and ending with human consumption of the food.

3. Have students write an explanation for the following situation:

   A board is accidentally left on the lawn in front of your house. When you take the board away, the grass is yellow. What happened to the grass and why?

Additional Activities:

A. Effect of no sunlight on green leaves (reinforces wheat berry demonstration).

   1. Cover one leaf with dark paper to block sunlight. Leave cover in place for 2-3 days.

   2. Check leaf color after 3 days. Absence of light should cause leaf to turn yellow. Discuss reasons for this (sunlight is necessary for photosynthesis).

B. Find out where plants store the food they make.

   1. Test a cooked potato and corn kernels with iodine solution to test for the presence of starch. Blue-black color indicates presence of starch.

Additional Resources:

1. "Plants - The Basic Food of Life" FS 581 (Dist. IMC)
   (31 captioned frames describing photosynthesis and food chains in simple terms.)
2. "What is Ecology?" SFS 574.5 Set (Dist. IMC)

   (In-depth look at food chains -- producers, consumers, decomposers.)

   Teacher's Guide, Record, Cassette and Filmstrip

3. "Pesticide Problem" SFS 574.5 Set (Dist. IMC)

   (Somewhat advanced for 4-5 but good for discussion of pros and cons of pesticide use.)

   Teacher's Guide, 2 Records, 2 Cassettes, 2 Filmstrips

4. "The People Problem: Feeding The World Family" SFS 330.9 (Dist. IMC)

   (Presents the world food problem but does not suggest solutions. Good as introduction to ecological ways of eating, eg. vegetarianism.)

   Teacher's Guide, Cassette, Filmstrip, 6 Activity Sheets for reproduction

5. "What is Food?" SFS 303 857 Guidance Associates (Nutrition Project Office)

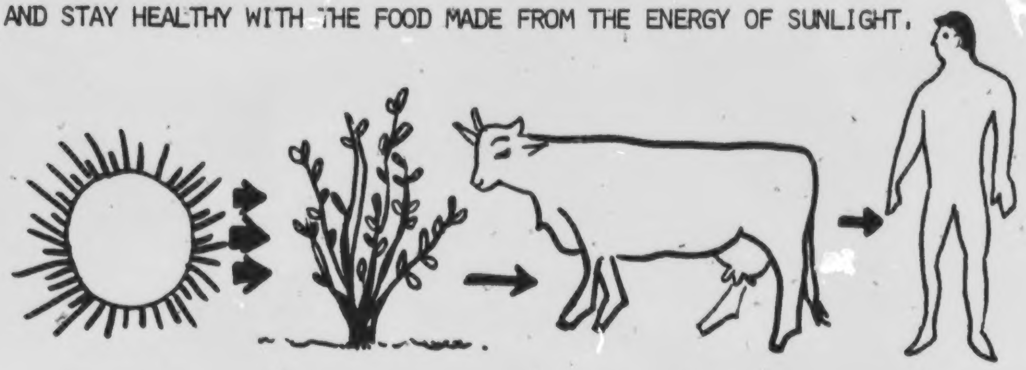
   (Gives students a basic understanding of the interdependence of all life forms. It shows the relationship between the food people eat and the forms of life that it comes from. Students see how people, animals, and plants are made up of the same basic chemical compounds which are known as the essential nutrients -- water, protein, fats, carbohydrates, vitamins, and minerals. The filmstrip illustrates photosynthesis and demonstrates the concepts of food chains and food webs.)

   Teacher's Guide, Cassette, Filmstrip

NAME ______________________

ENERGY FOR LIFE

DO YOU KNOW WHERE THE EARTH GETS MOST OF ITS ENERGY? RIGHT. FROM THE SUN. FOOD IS A FORM OF ENERGY TOO. EVERY BITE OF FOOD YOU EAT WAS MADE BY ENERGY CAPTURED FROM SUNLIGHT. YOUR BODY WILL GROW, GET ENERGY, AND STAY HEALTHY WITH THE FOOD MADE FROM THE ENERGY OF SUNLIGHT.



THE ENERGY STORED IN FOOD WAS PUT THERE BY GREEN PLANTS. THE ACTUAL MAKING OF FOOD BY THE SUN TAKES PLACE IN THE LEAVES. IN THE LEAVES ARE CELLS THAT CONTAIN A GREEN SUBSTANCE CALLED CHLOROPHYLL. WHEN CHLOROPHYLL, WATER, AND CARBON DIOXIDE COMBINE IN THE SUNLIGHT, SUGAR IS MADE. THE PROCESS OF FOOD MAKING BY A GREEN LEAF IS CALLED PHOTOSYNTHESIS. THE SUGAR THAT IS MADE HAS ANOTHER NAME--GLUCOSE. GREEN PLANTS ARE THE ONLY LIVING THINGS THAT CAN MAKE FOOD. PLANTS, OR ANIMALS THAT EAT PLANTS, PROVIDE ALL OUR FOOD.

SOME PLANTS CAN MAKE LARGE AMOUNTS OF SUGAR. SUGAR CANE AND SUGAR MAPLE TREES PRODUCE FOOD WE LIKE VERY MUCH. SUGAR CALLED GLUCOSE IS USED IN OUR BODIES AS QUICK ENERGY FOR OUR MUSCLES.

In some plants most of the sugar is changed to starch, another fuel food. Starch is found in almost every food made from plants. Potatoes, corn, and peas are a few of the plants that are rich in starch. Wheat and bread made from wheat is another good source of starch.

Green plants store their starch in their roots, seeds, or fruits. We eat these roots, such as beets, seeds and fruits to get the energy stored in the plant.

Plants can change some of their sugar into fat or oil. Some plants make so much oil that we can press it out and use it. Olives and peanuts are made into oil. This oil or fat is an important energy food, too. Fats and oils will give you energy and keep you warm.

Protein is another product made from sugar by plants. The plants take minerals from the soil and combine them with sugar to make protein. We eat the protein made by plants when we eat the plants or the animals that eat the plants.

All of the energy we get from food is from sugar, starch, fat, or protein. Since plants make all of these, we can say we get all of our energy from plants. The plants cannot make sugar without the sun. So we can say that all the energy we get from food begins with the energy from the sun!

NAME ______________________________

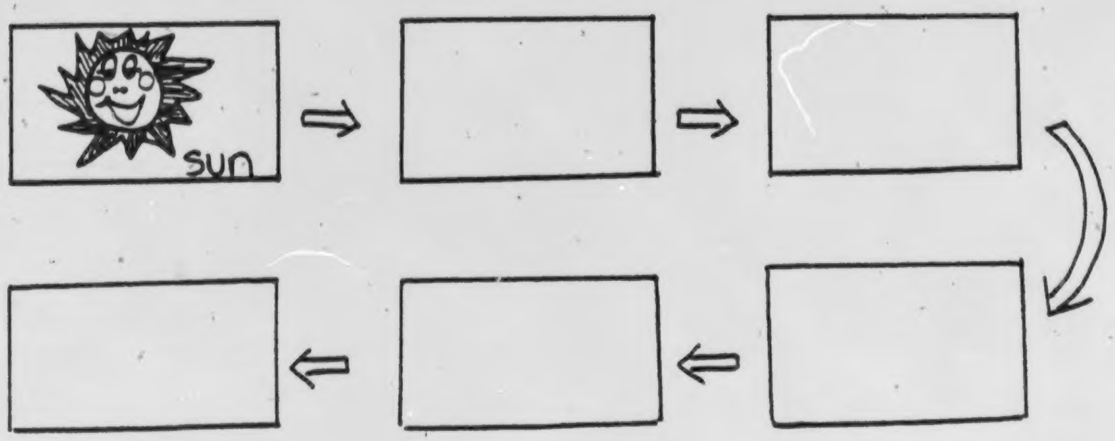
ENERGY FOR LIFE SELF TEST

READ ENERGY FOR LIFE AND FILL IN THE MISSING WORDS.

1. FOOD COMES FROM THE ENERGY OF THE ______________________.
2. SUGAR IS MADE IN PLANTS ONLY IN THE ______________________.
3. ANOTHER NAME FOR THE MAKING OF FOOD BY GREEN PLANTS IS ____.
4. SUGAR GIVES US QUICK ______________________________.
5. IN SOME PLANTS SUGAR IS STORED IN THE FORM OF ____________________.
6. FATS AND OILS GIVE US ______________________ AND KEEP US ____________.
7. PLANTS USE MINERALS FROM THE SOIL AND SUGAR TO MAKE ________________.

YOU ARE A PART OF MANY FOOD CHAINS. WRITE OR DRAW A FOOD CHAIN WITH THREE OR MORE PARTS. BEGIN WITH THE SUN AND END WITH AN ANIMAL OR A PERSON.

IF YOU NEED MORE THAN THREE SPACES, FOLLOW THE ARROWS.



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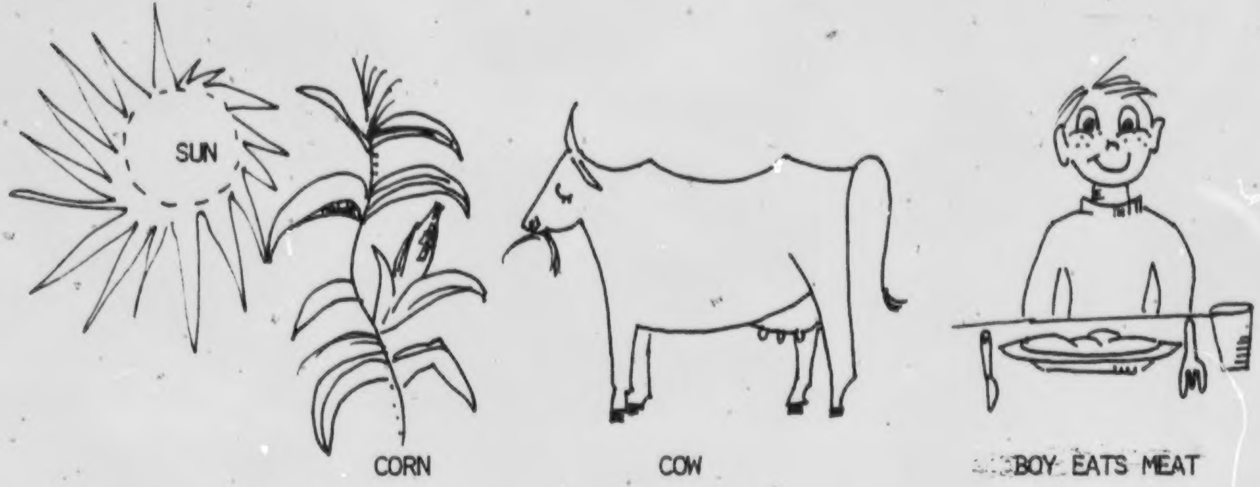
FOOD CHAINS

WHERE DOES ENERGY COME FROM?

ALL FORMS OF ENERGY CAN BE TRACED BACK TO THE SUN.



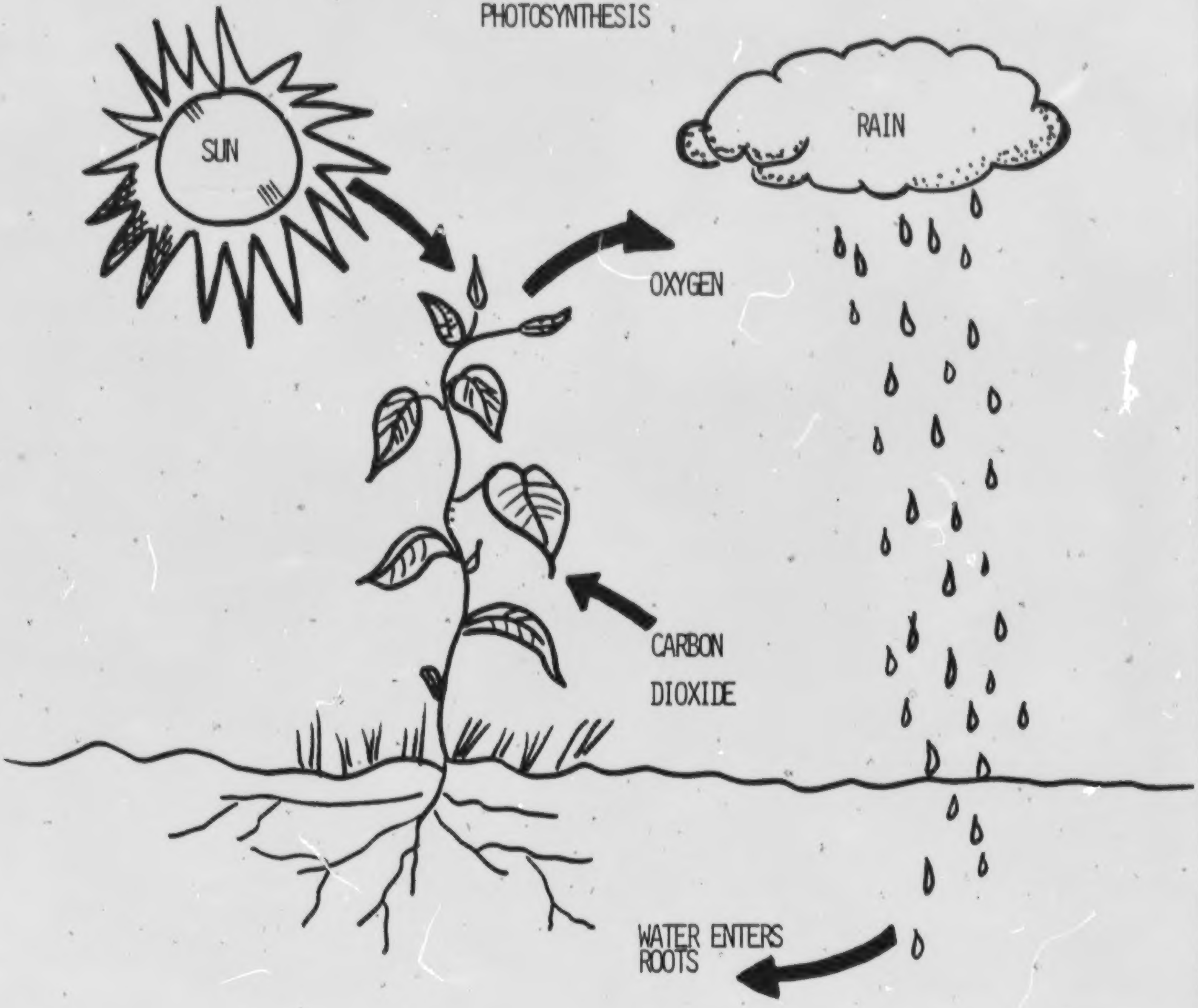
THE FOOD CHAIN

A GREEN PLANT ABSORBS THE SUN'S ENERGY. THE COW EATS THE GREEN PLANT. THE STORED ENERGY OF THE GREEN PLANT BECOMES PART OF THE COW IN THE FORM OF MEAT AND MILK. YOU EAT THE MEAT AND DRINK THE MILK FROM THE COW.

NOW YOU HAVE THE SUN'S ENERGY THAT TRAVELED THROUGH THE CORN AND THE COW. THIS USE OF FOOD, STARTING WITH THE SUN AND ENDING UP WITH MAN, IS CALLED A FOOD CHAIN.

NAME ______________________

PHOTOSYNTHESIS


SUN
RAIN
OXYGEN
CARBON DIOXIDE
WATER ENTERS ROOTS

PHOTOSYNTHESIS IS THE FOOD MAKING PROCESS WHICH OCCURS IN GREEN PLANTS.

THE FOOD THE GREEN PLANT MAKES IS STORED IN THE LEAVES, STEMS, AND ROOTS.

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Concept C

Fifth Grade
Subject Area: Social Studies

FOOD JOBS IN THE CITRUS INDUSTRY

Behavioral Objective: The student will develop an understanding of the teamwork involved in food production and distribution.

Process Objective: Active curiosity about the social world, skill in applying the unifying concepts of the disciplines to the understanding of the society and social life.

Teacher Information: By following one food through all phases of growth and productions, the student will learn about the jobs that relate to the food. Citrus fruit is the example here. In addition, community resource persons may be invited to class to explain how their jobs relate to food (nutritionist, sanitarian, food scientist).

Materials: Fresh orange

Instruction Kit "Worlds of Work"(includes sound filmstrip "Worlds of Work in the Citrus Industry")(Project SNAC)

"Food Career Crossword Puzzle," Food Careers," "Glossary of Different Food Careers" - student worksheets, 1 per student

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Vocabulary: citrus, food production, food distribution

ACTIVITY

Motivation:

Introduction to Food Related Jobs

Have students report what they ate for breakfast. Follow with these questions:

1. Did you prepare it? If not, who did?
2. Could you grow all of the foods you ate at the place where you live?
3. Where did each food come from?
4. Who grew the food and packaged it?

Show the orange and point out that this is just one food some of them ate. The students will learn about work in the citrus industry as an example of food production and food distribution.

Development:

Show the filmstrip "World of Work." Refer to the filmstrip guide for follow up activities in math, social studies, geography.

Have students complete the "Food Career Crossword Puzzle" and "Food Careers" using the "Glossary of Different Food Careers" worksheet.

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Evaluation:

Ask students to name at least three steps in the process of producing and distributing of one food (for example oranges) and to name the person who does the job.

Additional Activities:

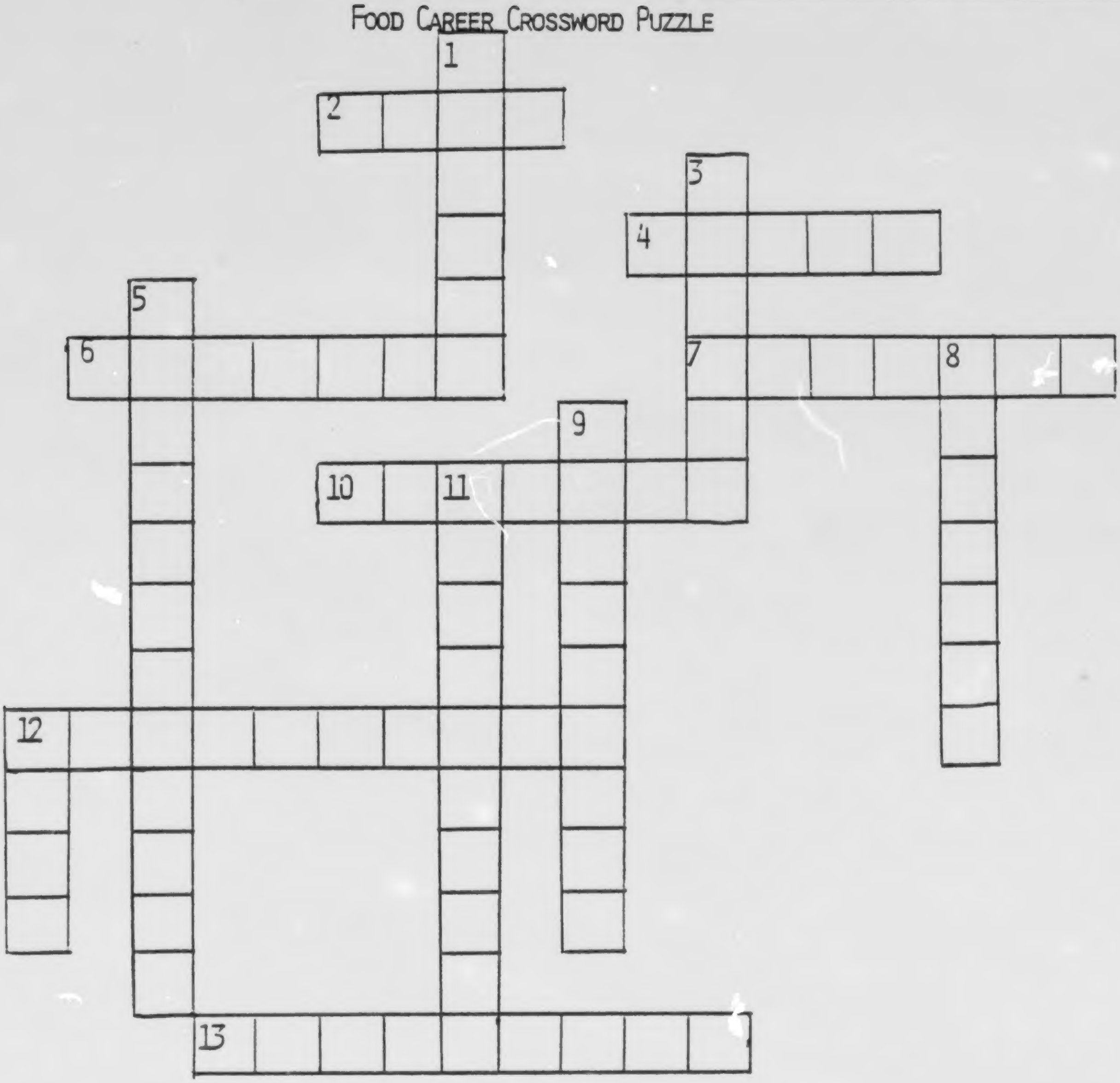
"To Market - To Market" game board (Project SNAC). ("To Market - To Market" can be ordered from Sunkist Growers, Inc., Dept. 7811, P. O. Box 788, Van Nuys, CA 91409 for $5.00)

Additional Resources:

Resource persons:	Public Health Sanitarian or Health Inspector from Health Dept.; Nutritionist or dietitian from school district or health department or hospital; food service personnel from school district or restaurant.
Books:	Health and Growth: Level 4, Scott Foresman, pp 178-179. (Sanitarian job description) and student worksheet.

NAME ______________________

FOOD CAREER CROSSWORD PUZZLE



WHAT DO WE CALL THE PERSON WHO . . . .

ACROSS

2. PREPARES SCHOOL LUNCHES?
4. MAKES BREAD, CAKES, AND COOKIES?
6. CUTS MEAT AT THE GROCERY STORE?
7. BRINGS MILK TO THE STORE OR TO YOUR HOUSE?
10. COLLECTS MONEY FOR FOOD AT THE STORE?
12. FLIES A PLANE TO SPRAY THE FARMERS CROPS?
13. INVENTS NEW FOODS AND TESTS FOODS?

DOWN

1. COOKS FOOD AT HOME?
3. GROWS OUR FOOD?
5. TEACHES PEOPLE ABOUT GOOD FOOD HABITS?
8. IS IN CHARGE OF THE WHOLE GROCERY STORE?
9. CATCHES TROUT AND TUNA?
11. CHECKS RESTAURANTS TO MAKE SURE THE FOOD IS SAFE AND CLEAN?
12. COOKS FOOD IN A RESTAURANT?

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NAME ______________________

FOOD CAREERS

MANY PEOPLE WORK IN JOBS THAT HAVE SOMETHING TO DO WITH FOOD. FIND THE JOB TITLES OF SOME FOOD WORKERS BY LOOKING UP, DOWN, AND ACROSS.

FIND THESE JOB TITLES:

INSPECTOR, FARMER, CHEF, SCIENTIST, GROCER, TRUCKER, PICKER, PROCESSOR

P B S N A R U S I
R O C E D E T C N
O E I B K M I B S
C R E C O R G O P
E S N E R A S M E
S A T R I F E H C
S P I C K E R A T
O U S A R N O T O
R P T R U C K E R

COMPLETE THESE SENTENCES WITH THE CORRECT JOB TITLE:

1. THE ______________________ GROWS FRUITS AND VEGETABLES.
2. THE ______________________ WORKS IN FRUIT ORCHARDS AND VEGETABLE FIELDS.
3. THE ______________________ TAKES THE FOOD TO THE FACTORY.
4. AN ______________________ CHECKS THE FOOD TO MAKE SURE IT IS CLEAN AND SAFE.
5. THE ______________________ DEVELOPS NEW TYPES OF FOOD.
6. THE ______________________ PACKAGES FOODS FOR THE MARKET.
7. FOOD IS SOLD BY THE ______________________.
8. THE ______________________ COOKS FOOD IN RESTAURANTS.

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GLOSSARY OF DIFFERENT FOOD CAREERS

BAKER - MAKES BREAD, CAKES, COOKIES, AND PIES IN THE BAKERY

BUTCHER - CUTS AND PACKAGES MEAT, FISH, AND POULTRY

CASHIER - COLLECTS MONEY FROM CUSTOMERS FOR PRODUCTS THEY BUY

CHEF - COOKS FOOD IN RESTAURANTS, HOSPITALS, AND HOTELS

CROPDUSTER - AN AIRPLANE PILOT WHO SPREADS SEEDS, FERTILIZERS, AND INSECT SPRAYS ON FARM LAND AND CROPS

FARMER - A PERSON WHO GROWS PLANTS AND ANIMALS WE USE FOR FOOD

FISHERMAN - CATCHES FISH IN OCEANS, RIVERS, AND LAKES

MANAGER - THE PERSON WHO IS THE BOSS IN A STORE OR A BUSINESS

MILKMAN - THE PERSON WHO DELIVERS MILK AND OTHER DIARY PRODUCTS TO STORES AND HOMES. THE MILKMAN DRIVES A TRUCK.

NUTRITIONIST (DIETITIAN) - A SCIENTIST OR A TEACHER WHO KNOWS AND TEACHES ABOUT FOOD AND HEALTHY DIETS

SANITARIAN (FOOD INSPECTOR) - A PERSON WHO INSPECTS RESTAURANTS TO MAKE SURE THE FOOD AND THE PEOPLE WHO WORK THERE ARE CLEAN.

SCIENTIST - A PERSON WHO INVENTS NEW FOODS AND TESTS FOODS TO MAKE SURE THEY ARE SAFE TO EAT

Concept D

Fifth Grade
Subject Area: Math
Health

NUTRITION IN A CAN? LABELS! LABELS!

Behavioral Objective: The student will name three items on a food label and describe the function of a nutritional label.

Process Objective: Listing, differentiating, grouping, categorizing, explaining.

Teacher Information: Everything that's packaged has a label. Foods in cans, boxes, jars, bags, and cartons have a label to describe the contents. There are ingredient labels and nutritional labels. Ingredient labels must include product name, weight, manufacturer, and ingredients in descending order. Some foods have legally established ingredients and are not required to list them (mayonnaise, for example). Nutritional labels list the nutritional value of one serving of the food and conform to rigid specifications. All foods which have added nutrients or make claims about their food value must have a nutritional label. Many food companies label all their foods with nutritional information by choice although they may not be required to do so by law.

Materials: Suggested Film: 16 mm, "Read The Label. Set A Better Table" (available on free loan from USDA)

"Cereal Labels" and "Read The Label" student worksheets
Learning Center: Label Reading Fold-out (Project SNAC)
Bulletin Board: "Labels! Labels!"
Empty containers from home, paste, paper, coloring supplies

Vocabulary: packaged, ingredient labels, nutritional labels, product, food value, specification

ACTIVITY

Motivation:

Show the film "Read The Label" and discuss, if possible. Why do companies put nutrition labels on foods? Do all foods have the nutrients listed? Why would a person buying food want nutrition information on the label?

Development:

Explain how to use the label reading learning center and show the worksheets to the students. The students can visit the learning center in pairs or individually to compare the cereal labels.

Bulletin Board Have students bring labels, packages, boxes from home and share and tell what he recognizes on label, such as: brand, product name, ingredients, weight, games, picture. Paste labels on a collage. Paste label with nutrition information on one side and standard labels on the other.

Have each student create a label with important nutrition and other label information using a made up brand name. Wrap the label on can or box.

Evaluation:

Ask students to list three different types of information on a nutrition label.

Additional Resources:

"We want you to know about Nutrition Labels on Food", Food and Drug Admin.

NAME ____________________

CEREAL LABELS

DIRECTIONS: READ THE NUTRITION LABEL FOR CHEERIOS.

1. WHAT KIND OF GRAIN IS CHEERIOS MADE FROM? ____________________

2. HOW MANY OUNCES DOES ONE SERVING OF CHEERIOS WEIGH? ______________

3. HOW MANY CUPS IS ONE SERVING OF CHEERIOS? ____________________

4. HOW MANY CALORIES ARE IN ONE SERVING OF CHEERIOS? ______________

5. HOW MANY GRAMS OF CARBOHYDRATE ARE IN ONE SERVING OF CHEERIOS? ________

READ THE NUTRITION LABEL ON SUGAR SMACKS AND RICE KRISPIES. THEN FILL IN THESE ANSWERS.

1. ONE SERVING OF SUGAR SMACKS IS HOW MANY CUPS? ____________________

2. RICE KRISPIES AND SUGAR SMACKS HAVE VITAMINS AND MINERALS ADDED. HOW MANY ARE ADDED? ____________________

3. WHICH CEREAL IS SUGAR-COATED? ____________________

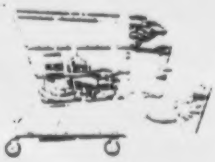
4. WHICH CEREAL IS MADE WITH MORE SUGAR? ____________________
(READ THE INGREDIENTS. THE CEREAL WITH SUGAR LISTED FIRST HAS MORE SUGAR.)

5. WHICH BOX OF CEREAL WEIGHS MORE--RICE KRISPIES OR SUGAR SMACKS?
____
HOW MUCH MORE DOES IT WEIGH? ____________________

6. DOES THE CEREAL HAVE MORE OR LESS CALCIUM WHEN MILK IS ADDED? ________
WHY? ____________________

NAME ______________________

READ THE LABEL



NUTRITION LABELS TELL YOU HOW MUCH NUTRITION IS IN THE FOOD YOU EAT.

1. FIND THE TWO SUGAR FROSTED CEREAL LABELS. LOOK AT THE SECTION THAT TELLS ABOUT NUTRIENTS. ARE THE NUMBERS FOR PROTEIN THE SAME FOR EACH BOX? ____________ WHICH HAS MORE IRON? __________________

2. HOW MUCH FAT DOES ONE KELLOGG'S FROSTED POP TART GIVE YOU? ________ DOES IT GIVE YOU MORE FAT OR LESS FAT THAN ONE SERVING OF KELLOGG'S RICE KRISPIES? __________________

3. COMPARE THE PROTEIN IN RICE KRISPIES AND CHEERIOS. WHICH CEREAL HAS MORE PROTEIN? ________________________________

4. DOES KELLOGG'S RAISIN BRAN HAVE ANY VITAMIN C IN IT? ____________ WHICH OF THE FOUR FOOD GROUPS IS KNOWN FOR VITAMIN C? ____________ ________________________

5. LOOK AT THE DEL MONTE PINEAPPLE CHUNKS LABEL. WHAT VITAMIN IS THE HIGHEST? ____________________________

6. READ THE GLORIETTA STEWED TOMATOES LABEL. HOW BIG IS ONE SERVING? ______________________ TOMATOES ARE IN WHICH FOOD GROUP? ______________________

7. WHAT ARE THE TWO VITAMINS WITH THE LARGEST NUMBER IN SAN BENITO TOMATO SAUCE? ____________________, ________________________

8. FIND THE TOWN HOUSE CREAM OF MUSHROOM SOUP. FIND THE NUTRIENT CALCIUM. IS THERE MORE CALCIUM IN SOUP MADE WITH MILK? ____________ WHY? ____

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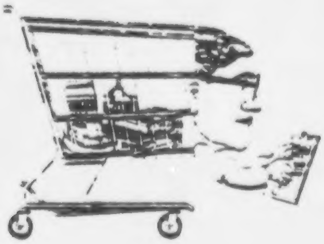
9. WHICH NUTRIENT IS THE HIGHEST IN THE CARNATION EVAPORATED MILK?
______________________ HOW MUCH DOES IT HAVE ? ________________

10. HOW MANY SERVINGS OF TUNA DOES ONE CAN OF STARKIST TUNA HAVE IN
IT? ______________________ HOW MUCH PROTEIN IS IN ONE
SERVING? ________________________________
HOW MUCH FAT? ____________________________
WHAT ARE THREE NUTRIENTS IN STARKIST TUNA THAT ARE 100 OR MORE?
1. ________________ 2. ________________ 3. ________________



Concept B

Fifth Grade

Subject Area: Social Studies

9

AROUND THE WORLD WITH FOOD

Behavioral Objective: The student will recognize cultural differences in food choices and eating styles and give examples of foods and their country of origin.

Process Objective: Belief in the dignity and worth of others; receptivity to unfamiliar experience.

Teacher Information: This activity involves a study of cultures through eating styles. Any social studies films or filmstrips that show people eating will be appropriate.

Materials: Picture of a hand (attached)
1 fork, 1 knife, 1 spoon, 1 pair of chopsticks
Suggested film: "The Big Dinner Table" - County IMC
"Around the World with Food" - booklet (5 pages) - 1 per student

---

ACTIVITY

Motivation:

To introduce the unit display a fork, knife, spoon, chopsticks and picture of a hand. Explain that the class will take a trip around the world by studying the ways people eat and what they eat.

Development:

1. Show a film or filmstrip about Eskimoes, Asia, or Africa and observe what people use to eat with and the kinds of foods they eat, or borrow the film "The Big Dinner Table" from the county IMC or other outlet.

2. Have students read "Around the World with Food" and discuss their written answers. Find countries on a globe.

3. For student assignments have groups of students do these activities:

   A. Library research on specific countries (research page attached).

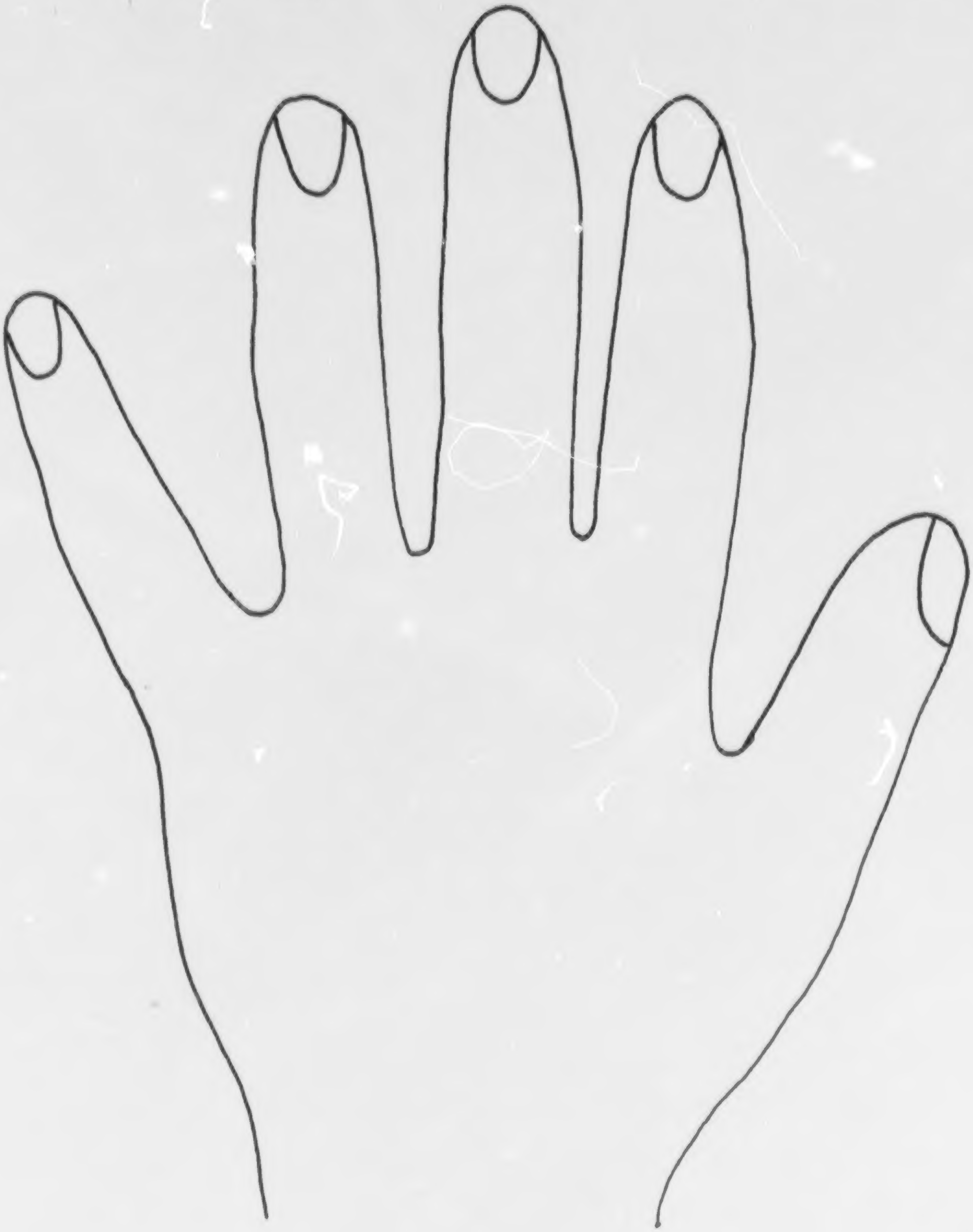
   B. Find pictures of the way people eat (magazine) and make a bulletin board titled: People Eat Many Ways Around the World.

Evaluation:

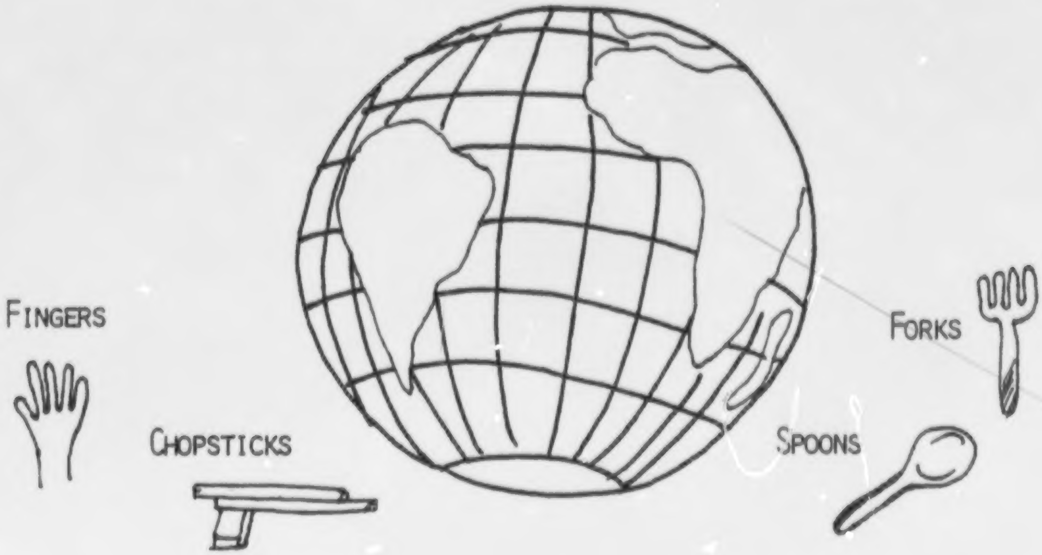
Ask students to name three countries that have different ways of eating; to name three dishes that are popular in those countries and describe how it is eaten.

Additional Activities:

As a culminating activity prepare the suggested recipes or choose your own or invite a parent to prepare a cultural recipe. (recipes attached)



AROUND THE WORLD WITH FOOD



AROUND THE WORLD WITH FINGERS, CHOPSTICKS, SPOONS, AND FORKS:

EVERY CULTURE HAS SPECIAL FOODS AND SPECIAL WAYS OF EATING. AS PEOPLE MOVE FROM ONE PLACE TO ANOTHER THEY TAKE THEIR EATING CUSTOMS WITH THEM. BECAUSE PEOPLE IN THE UNITED STATES HAVE COME FROM ALL OVER THE WORLD, WE EAT WITH FINGERS, CHOPSTICKS, SPOONS, AND FORKS.

WHETHER YOU EAT A FOOD WITH YOUR FINGERS, A FORK, A SPOON OR CHOPSTICKS DEPENDS ON HOW THE FOOD IS PREPARED, WHERE YOU ARE EATING AND THE LOCAL CUSTOMS.

WHEN YOU READ ABOUT THE EATING CUSTOMS IN OTHER COUNTRIES ON THE NEXT FEW PAGES, REMEMBER THAT MANY OF THEIR CUSTOMS ARE THE BASIS FOR THE WAY WE EAT TODAY.

FINGERS:

EARLIEST MAN ATE WITH HIS FINGERS. IN MANY PARTS OF THE WORLD PEOPLE STILL EAT MAINLY WITH THEIR FINGERS. IN SOME CULTURES ALL THE FOOD IS PICKED UP AND EATEN WITH THE FINGERS. IN SOME CULTURES BREAD IS USED TO SCOOP UP THE FOOD.

IN INDIA A ROUND, FLAT BREAD MADE OF WHEAT FLOUR CALLED "CHUPPATI" IS TORN INTO SMALL PIECES AND USED AS A SCOOP FOR FOOD. THE TORTILLA IS A MEXICAN BREAD THAT IS USED TO WRAP FOODS WHICH CAN BE EATEN WITH THE FINGERS, FOR EXAMPLE TACOS AND BURRITOS. THE TORTILLA IS ROUND AND FLAT AND IS MADE OF CORNMEAL OR WHEAT FLOUR.

POI IS AN HAWAIIAN FOOD MADE FROM THE ROOT OF THE TARO PLANT. THE TARO ROOT IS MASHED AND THE POI IS EATEN WITH THE FINGERS. TWO OR THREE FINGERS ARE USED DEPENDING ON HOW THICK THE POI IS.

IN THE NORTHERNMOST PART OF NORTH AMERICA, SOME ESKIMO TRIBES AND OTHER HUNTING GROUPS EAT MOST OF THEIR MEALS WITH THEIR FINGERS. THEY EAT MAINLY FISH AND ANIMALS LIKE CARIBOU, MOOSE, SEAL, WHALE AND REINDEER. THEY CANNOT GROW FRUITS AND VEGETABLES BECAUSE THE GROUND IS SO COLD. THEY PICK MOSS AND WILD BERRIES WHEN THEY CAN FIND THEM AND GET THEIR EGGS FROM THE NESTS OF WILD BIRDS.

IN AFRICA, IN A COUNTRY CALLED NIGERIA, THE MAIN FOOD IS MILLET. MILLET IS A CEREAL LIKE CORN AND IS EATEN IN SEVERAL WAYS. THE MILLET IS POUNDED AND MADE INTO SMALL BALLS WHICH ARE EATEN WITH FINGERS OR THE MILLET IS MADE INTO A DRINK. THE MILLET CAN ALSO BE MADE INTO A THIN CEREAL WHICH IS EATEN WITH A WOODEN SPOON OR A SMALL GOURD.

In the United States we eat many foods with our fingers. Some of your favorite lunch and picnic foods are finger foods — sandwiches, hot dogs, hamburgers, corn on the cob, and cookies.

Chopsticks:

Chopsticks are two long thin sticks originally made of bamboo. Now they can be made of wood, plastic or metal. They are used mainly in Asian countries as the main eating utensil. They have been used for thousands of years in Japan and China. Today chopsticks are used by people all over the world.

The foods eaten with chopsticks are usually cut into bite-sized pieces. Rice is the main food in Asia. Pickled vegetables and cooked vegetables, especially the green ones, are very popular throughout Asia. A very important legume is the soybean. Japan is surrounded by the ocean so fish is very popular. Fish is eaten either cooked, pickled or raw. Pork and chicken are favorite meats used in Asian countries. In countries all around the world, people use chopsticks when Asian food is served.

Spoons:

Spoons are used in most parts of the world today. The way a food is prepared helps us decide if we should use a spoon. Foods that are very wet are usually eaten with a spoon.

In Asia the spoons are usually made of porcelain. They are flat on the bottom and the handle turns up. Spoons are used mainly for serving food.

In Thailand spoons are the main eating utensil. Bowls are filled with rice and other foods and the food is eaten with a spoon.

Ice cream in a bowl and pudding are easier to eat with a spoon than with a fork or chopsticks. Soup is usually eaten with a spoon but in Japan soup is served in small bowls and is drunk right from the bowl.

Forks:

Forks are used by people in all parts of the world but until about three hundred years ago they were not popular. An English king made them popular in Europe. Until forks became popular eating tools in Europe, most people ate with their hands or with spoons. Forks can be made of wood, metal or plastic.

Soft foods, like cake, are easy to cut with a fork, but often a fork and a knife are both used to cut foods such as meat. The way a person holds a knife and fork depends on where they live. In the U. S. most people hold the fork in the left hand and the knife in the right hand to cut food. Then we move the fork to our right hand to pick up the food. In Europe the fork stays in the left hand and the knife stays in the right hand for eating. There is no one best way to use a knife and fork. The way you use a knife and fork depends on what you learn from your family and friends.

ACTIVITIES:

LIST SOME FOODS THAT NEED TO BE EATEN WITH

A KNIFE ____

A FORK ____

A SPOON ____

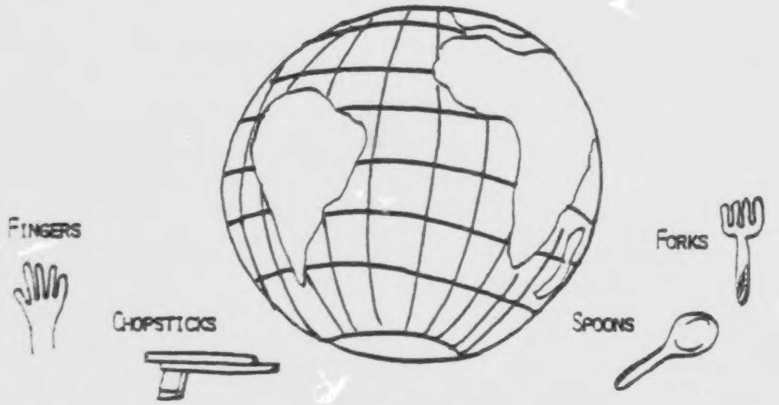
LIST SOME FOODS EATEN WITH FINGERS ______________________

____

HOW WOULD YOU PREPARE FOOD TO BE EATEN WITH CHOPSTICKS?

____

____


FINGERS
CHOPSTICKS
SPOONS
FORKS

NAME ______________________

AROUND THE WORLD WITH FOOD

RECIPES

FINGER FOOD

BANANA POI (SAMOA)

YOU NEED:	12 BANANAS 1 CUP COCONUT MILK GRATED LEMON PEEL
EQUIPMENT:	LARGE BOWL FORK AND LADEL MEASURING CUP SMALL PAPER CUPS
DIRECTIONS:	FIRST, PEEL THE BANANAS AND MASH WELL. ADD A LITTLE WATER AND SOME ICE CUBES. THEN ADD ONE CUP OF COCONUT MILK. FOR MORE FLAVOR ADD A LITTLE GRATED LEMON PEEL. IT SHOULD HAVE THE CONSISTENCY OF A MALT.

CHOPSTICK FOOD

STIR-FRIED VEGETABLES (CHINA)

YOU NEED:	3 CUPS OF MUNG BEAN SPROUTS 1 - 2 ZUCCHINI SESAME SEEDS SOY SAUCE OIL
EQUIPMENT:	KNIFE CUTTING BOARD ELECTRIC SKILLET OR "WOK" SPATULA CHOPSTICKS
DIRECTIONS:	ADD 1 TABLESPOON OIL TO SKILLET. HEAT TO 375 DEGREES. CUT ZUCCHINI INTO STRIPS OR CROSS SLICES. TO STIRFRY, DROP THE ZUCCHINI INTO THE HOT OIL VERY CAREFULLY. STIR IT AND FRY IT QUICKLY. ADD BEANSPROUTS AND STIR. ADD A FEW DROPS OF SOY SAUCE. VEGETABLES SHOULD STILL BE CRISP.

SPOON FOOD

TOFU SOUP
(JAPAN)

YOU NEED:	6 CUPS CHICKEN STOCK TOFU 4 EGGS

COOKING UTENSILS NEEDED:
- LARGE POT
- KNIFE
- CUTTING BOARD
- FORK
- BOWL
- MEASURING CUPS

DIRECTIONS: CUT THE TOFU INTO TINY PIECES. BRING THE 6 CUPS OF CHICKEN STOCK TO A BOIL AND ADD THE TOFU PIECES.

IN A BOWL, BEAT UP THE EGGS AND ADD TO THE SOUP. WHEN YOU ADD THE EGGS, POUR THEM OVER A FORK INTO THE BOILING SOUP STOCK.

TOFU IS ALSO CALLED BEAN-CURD CAKE. IT IS MADE FROM DRIED SOYBEANS. IN JAPANESE COOKING, TOFU IS MIXED WITH VEGETABLES, COOKED WITH FISH OR MEAT, OR USED IN SOUP. IN JAPAN AND CHINA, SOY BEANS ARE EATEN IN MANY OTHER FORMS BECAUSE THEY ARE RICH IN PROTEIN.

YOU MAY HAVE HAD SOY SAUCE BEFORE.

FORK FOOD

SUGGESTIONS:	TOSSED SALAD COLESLAW

Concept D

ENRICHMENT

Fifth Grade
Subject Area: Health
Reading

10

WHAT'S ADDED TO THE FOOD I EAT?
(ENRICHED AND FORTIFIED FOODS)

Behavioral Objective: The student will identify one example of a "fortified" food and one "enriched" food and explain reasons for enrichment and fortification of food.

Process Objective: Categorizing, Skill in the process of observing, inferring.

Teacher Information: Foods are enriched with B vitamins and iron to replace those nutrients which are removed in the milling and refining process. All refined cereal and grain products are enriched by law. Fortified foods have nutrients such as vitamins, minerals, or protein added to increase the nutritional value of a food above what is normally in the food. Milk is fortified with vitamin D. Cereals that have large amounts of vitamins and minerals added are fortified rather than enriched.

Materials
White bread wrapper
Milk carton
Variety of bread and cereal packages and fruit and vegetable juices
"What is Added" - student worksheet

Vocabulary enriched, fortified, refined, thiamin, riboflavin, niacin, iron, vitamin B

ACTIVITY

Motivation

Collect these ahead of time: Labels that say "fortified" or "enriched".

Read a milk carton label and a white bread label. Show the words "fortified" and "enriched" to the students. Ask them to explain what they think those terms mean when they are on a food label.

Development

1. Define "enriched" and "fortified" (see above). Discuss reasons companies add nutrients to some foods.
2. Assign students to complete the worksheet "What is Added."

Evaluation:

Ask students to name one example of a "fortified food" and one "enriched food" and explain reasons for enrichment and fortification.

Additional Activities:

Make a bulletin board of labels titled "Enriched and Fortified."

Additional Resources

Filmstrip: "Snack Facts" from District IMC
(explains enrichment of refined grain products)

Poster: "Nutrition Facts to Guide Your Food Choices" Cereal
Institute, Inc., 1111 Plaza Drive, Schaumburg, Ill,
60195 (free)
(Also available on loan from Project SNAC)

Film: "Read the Label: Set a Better Table" from USDA

NOTES FOR TEACHER:

1. Breakfast cereals are of these basic types: whole grain, enriched, fortified, and multivitamin and iron supplements.

   Whole grain cereals are made from all parts of the grain and provide in varying amounts the nutrients naturally present in the grain. (Example- Nabisco Shredded Wheat, Oatmeal)

   Some whole grain cereals are "fortified" with select nutrients to provide these nutrients at higher levels than the non-fortified whole grain cereals (Examples- Grape - Nuts Flakes, Wheaties, Frosted Mini-Wheats, Wheat Chex)

   Enriched cereals are made with grains that have been refined and which have certain nutrients added in quanities that meet the Food and Drug Administration definition and standard of identity for an enriched product. The nutrients that must be replaced are THIAMIN, RIBOFLAVIN, NIACIN, AND IRON. (Example- Cream of Wheat)

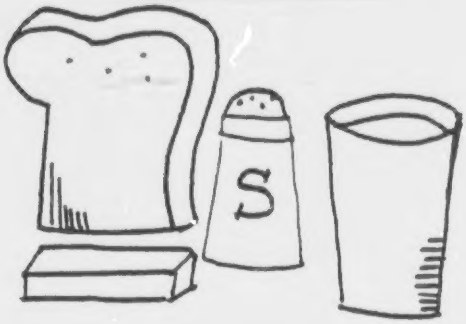
   Fortified cereals provide greater than the whole grain amounts of vitamins and iron. Most ready-to-eat cerals are fortified with 25% of the USRDA for eight or more vitamins and minerals per serving. (Example- Cheerios)

   Multivitamin or Multivitamin and iron supplements are what some ready-to-eat cereals are called because they are even more highly fortified with vitamins and iron (up to 50% USRDA per serving) than regular fortified products. (Ex-Total, Product 19) Many pre-sweetened cereals are fortified this highly.

2. Salt is fortified with iodine (iodized salt) to prevent an iodine deficiency in areas where little fish is eaten and soil is iodine depleted. Iodine deficiency results in a thyroid problem called goiter.
3. Margarine is fortified with vitamin A to equal the amount of vitamin A naturally present in butter since they are used interchangeably.
4. Milk is fortified with vitamin A if the butterfat has been removed, with vitamin D to enhance the body's use of calcium, and protein to increase nutrient value and increase palatability in low-fat milk.

NAME ____________________

WHAT IS ADDED



DIRECTIONS:

1. WRITE THE NAMES OF FOUR FOODS THAT HAVE LABELS.
2. READ THE WHOLE LABEL ON EACH FOOD VERY CAREFULLY.
3. FILL IN THE ANSWERS TO THE QUESTIONS.

	FOOD	DOES THE PACKAGE HAVE THE WORDS "ENRICHED" OR "FORTIFIED" ON IT?	WHAT DOES THE LABEL SAY HAS BEEN ADDED?
1.			
2.			
3.			
4.			

WHY DO FOOD COMPANIES ADD VITAMINS AND MINERALS TO SOME FOODS?

____

____

HINT: SOME FOODS THAT HAVE VITAMINS, MINERALS, OR PROTEIN ADDED ARE SALT, BUTTER, MARGARINE, MILK, BREAD, FLOUR, CEREAL, AND FRUIT DRINKS.

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Concept A

Fifth Grade
Subject Area: Health
Science
Math

JUNK FOOD JUNKIE vs. SUPERRAT:

(Animal Feeding Experiments)

Behavioral Objective: The students will observe and compare growth and physical characteristics of rats fed nutritious and non-nutritious diets to determine the advantages of a balanced diet.

Process Objective: Skill in engaging in the processes of observing, inferring, valuing; commitment to the inductive and deductive methods of verifying and testing values.

Teacher Information: Telling students about good and poor nutrition is one thing; letting them see the physical effects is quite another. The experiments with animals makes a much more dramatic impact. Order rats well in advance. Allow experiment to run for 6 to 7 weeks. The article "Teaching Nutrition the 'Rat' Way" on page 54 is good background information for teaching this lesson.

Materials: 2 laboratory bred male rats - 20 days old (litter mates, same weight) available from Berkeley Biological Supply ($13.00 a pair) or contact a local college.
2 cages with water bottles, rat litter
gram scale
coffee can with lid
school lunch scraps plus milk
rat experiment record sheet

Vocabulary: experiment, poor nutrition, nutritious, non-nutritious, physical changes, irritable

ACTIVITY

Motivation:

Several weeks before experiments, order rats. They may have to be bred. Obtain cages, scale and a coffee can. Explain the experiment and its purpose.

Development:

Day 1 Label one rat A and the other B. Mark rat A on his tail with a laundry marker. Weigh each rat and record weight.

Feed rat a balanced diet of left-overs from the Type A lunch and milk to drink. Feed rat B candy, chips, coke, cake, refined pre-sweetened cereal, cheese puffs, cookies.

Weeks 1-6 Every day assign 2 pupils to observe and record what and how much the rats ate.

Weigh the rats at weekly intervals in the coffee can. Teacher and pupils do this together.

Note physical changes and discuss. Rat A will become fat and have clean glossy hair, bright eyes and be active and alert. Rat B may get fat or lose weight (he should lose), his hair may start to fall out, tail becomes bruised, and he may become very irritable.

Note: While pupils must understand that the rats are part of a scientific study and not to be thought of or treated as pets, naming them adds interest.

Rats should stay in room over weekends. If taken home, experiment may be ruined if rats are fed the wrong foods.

Evaluation:

Have each student write a description of the changes in the rats and tell how a balanced diet makes a diffence in physical appearance and mental health.

Resource Booklet:

Animal Feeding Demonstrators for the classroom, National Dairy Council, 1969

NOTE: When the experiment has been completed it is best not to send the rats home as pets. Instead have the custodian dispose of them or take them to the SPCA for disposal.

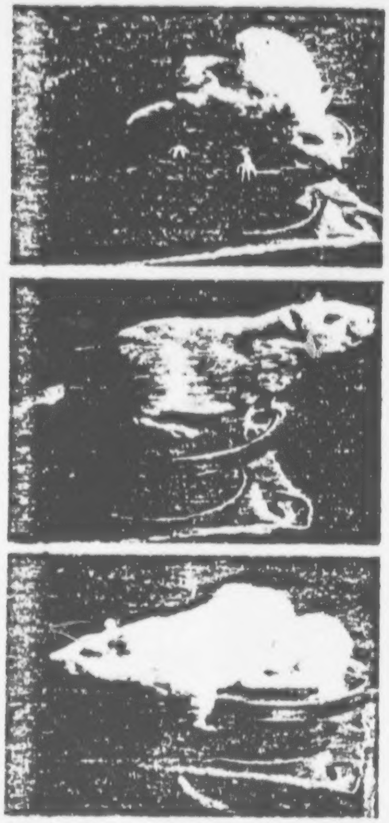
NAME ____________________

RAT EXPERIMENT RECORD SHEET

DATE	RAT A		RAT B	
	WEIGHT	PHYSICAL CONDITION	WEIGHT	PHYSICAL CONDITION
DAY 1				
END OF FIRST WEEK				
END OF SECOND WEEK				
END OF THIRD WEEK				
END OF FOURTH WEEK				
END OF FIFTH WEEK				
END OF SIXTH WEEK				

Teaching Nutrition the 'Rat' Way

With a few rats—which, by the way, are gentle, quiet and clean—and about six weeks of differing diets, students can be taught that nutrition is an important part of their educational experience.



Rat-feeding experiments can lead students to a better understanding of nutrition and its value.

Would you like to reach the child who turns up his nose at almost every lunch selection? There is a way—but you'll need a few rats and a few weeks.

On the elementary, junior high and senior high school levels, students can be taught the value of nutrition in a classroom experiment in which rats are fed different diets and their growth rates are monitored by students.

The value of this type of experiment in teaching nutrition effectively has been demonstrated many times. The Wheat Flour Institute in Chicago has suggested schoolwide animal-feeding experiments to stimulate students' interest in food and to demonstrate nutrition principles effectively.

Rats are best for this type of experiment, according to scientists and nutritionists, because most of their body functions and nutritional requirements are comparable to man's. Rats are also gentle, quiet, clean, easily handled and cared for and require a minimum of space.

To be as scientific as possible, scientists suggest using rats between 21 and 28 days old because it is at this age that rats are beginning their greatest growth period.

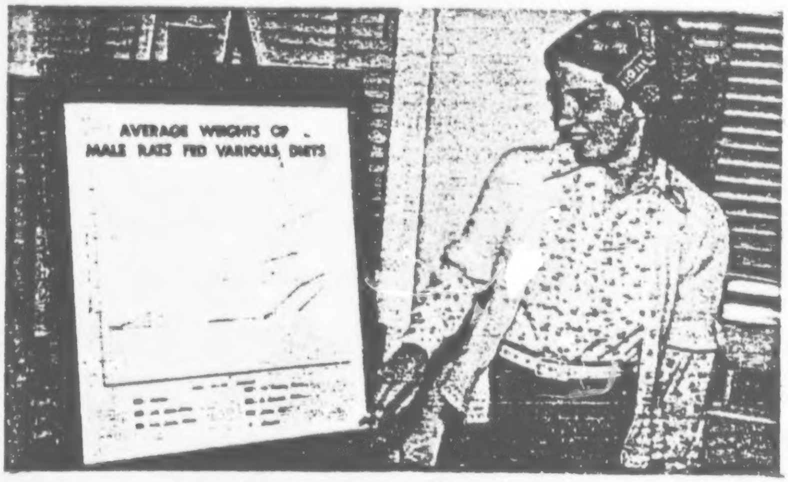
For best results, three different diets are suggested and at least two rats for each diet are necessary. The first diet should be a Type A school lunch and probably should be taken directly from the cafeteria meal served students. The second diet, to illustrate the importance of protein in growth, should omit meat and milk. The third should be a snack diet that omits fruits and vegetables. Food on the diet and water should be accessible to the rats at all times.

Certain equipment for any study of this type is needed: scales or balances, brush for cleaning, one cage for each rat, a meat grinder, mixing bowl, food cups and water bottles, paper towels or newspapers, a notebook, weight chart and graph paper.

Steps to follow include planning diets, obtaining rats, deciding how long the experiment will be, deciding where to keep rats, organizing class for care of rats and preparing graphs and charts to indicate growth rates. Experiments of six to eight weeks are usually required to show different growth rates.

Students will have to be organized for daily feeding of rats, cleaning of cages and recording of observations. Weekly steps to be followed include weighing rats on the same day of each week, scrubbing cages and recording weights and plotting of graphs.

Experiments of varying difficul-

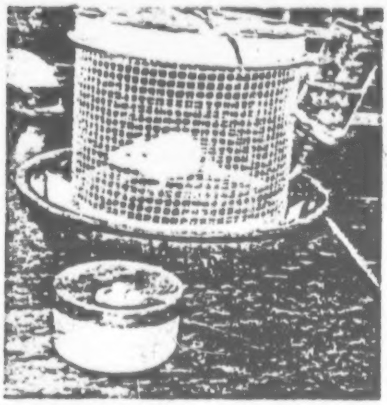

AVERAGE WEIGHTS OF MALE RATS FED VARIOUS DIETS

Simple line graph portrays average growth data.

more Rats

ty should be used in relation to the students' grade level.

On the elementary level, a teacher might want to change the diet of rats eating the deficient diets after about five weeks to a Type A lunch to show the benefits of a balanced diet.



Rats should be individually caged with food and water always available.

On the junior high school level, popular interest in reducing diets might be a topic for exploration. Diets with 25 percent of the calories from carbohydrates, 50 percent from fat and 25 percent from protein might be compared to a diet with 50 percent of the calories from carbohydrates, 20 percent from protein and 30 percent from fat.

The importance of vitamins can be taught through the use of diets deficient in vitamin B. A thiamine deficiency will become noticeable in two to three weeks in the loss of appetite and weight.

To teach the importance of variety in a diet, rats can be fed a single food such as enriched bread alone or pasteurized whole milk alone.

On the high school level, students should be urged to tackle more complex study:

- Rats fed a diet deficient in milk can be subjected to x-rays to study bone and tooth development.

Elementary students observe rats fed diet of snacks.

- Blood can be analyzed for such things as blood cell count and hematocrit.
- Rats may be placed in exercise cages and studied for physical endurance levels.
- The effects of various drugs can be studied.
- A maze can be constructed to see if diets affect the learning abilities of the rats. Food can be used as a reward for the rats after

It Worked in Florida

"You are what you eat" students at Glen Springs Elementary School in Gainesville, Florida, have learned from their experiment with rats.

Two white rats—Ben and Willard—were supplied by the Florida Dairy Council and fed and cared for by fifth grade students. Each day the rats were fed a noon meal from the school cafeteria. One rat, however, was deprived of milk.

"Willard is the healthy one," a 10 year-old member of the class said. "He's as healthy as we are because he gets the full lunch."

Another member of the class said an observer could readily see the effects of the two diets in comparing the tails and fur of the rats: "Willard's tail is pink and healthy and Ben's is all brown. Ben's a lot lighter, too."

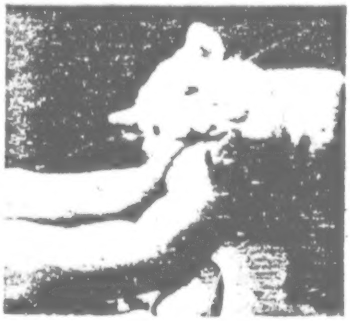
Also tested were the effects of snack foods on one of the rats by feeding it peanut butter sandwiches, soft drinks and chocolate bars.

"He got sort of sick," one student said. "So if that is all you ate, you'd get sick, too."

A typical noontime fare for the rats included a portion of fish, cheese, potatoes, green beans, applesauce and a cinnamon roll.

Students kept track of changes in Ben's and Willard's growth with a weekly weigh-in. They fed, cleaned and weighed the rats for six weeks.

The rats were just one phase of a comprehensive nutrition education program at the school developed by Alachua County Schools Foodservice Director Reta Matthews, school Principal Lilly May Shaw, several teachers and the lunchroom director at Glen Springs.



"Ben" takes a bite of green bean as part of his daily diet in Glen Springs' nutrition program.

Students find that weighing a squirming rat can be a rather difficult task during an experiment with rats at Glen Springs Elementary School at Gainesville, Florida.

completion of running the maze. The adequately fed rat will not be as ambitious or motivated as the poorly fed one.

- Autopsies can be conducted to observe bones, liver weights, etc.
- Genetic and reproduction experiments also can be conducted.

Evaluation by teacher and students is the final step in the experiment. They will have to determine whether the purposes of the study were achieved, whether the study was conducted in an organized way and what were the results of the study.

Students should find out that nutrients needed by the body are available through a variety of food, that deficiencies occur because of a lack of specific or groups of nutrients, that the body functions best when nutrients are provided in proper balance and that growth reversals occur when diets are changed.

Students compare the physical characteristics of rats fed a diet deficient in protein with one fed the optimum diet.

About the Source

Three professors at Texas Tech University—Dr. Shiang Ping Yang, Dr. Mina W. Lamb and Margarette L. Harden—provided the information for this article on the use of rats in teaching nutrition. All are with the College of Home Economics' department of food and nutrition. Dr. Yang is chairman of the department.

Type A Wins the Day

Once turned off to learning how different kinds of foods affect their health, junior high school students in Salinas, California are suddenly turned on to nutrition thanks to Project Rat.

Students are learning that a balanced diet of meat, milk products, vegetables, cereals and fruits is superior to either heavy starch or sugar diets.

In Salinas, students enrolled in an El Sausal Junior High School science class are learning by witnessing dramatic effects of different types of diets on five rats.

For the first three weeks of the experiment one rat was fed the kind of sugary, empty-calorie foods most teenagers love. Two others were fed only starchy foods and another two were treated to a completely balanced diet.

Candy and cake with icing and cream filling, cookies, soda pop and popsicles caused the single rat to gain weight for the first few days.

The more active and thinner of the five rats before the experiment were put on the diet of starches. The least active rats were fed the Type A lunch directly from the school cafeteria.

Distinct changes in the appearance and activity levels of the three dietary units were recorded by students.

The rat whose weight had increased at first on the sugar diet began to lose heavily. The first week he gained 23.1 grams; the third week he lost 121.9 grams. The weight loss was more than one-third of his body weight. His formerly sleek coat dulled and roughened, his appetite diminished and he became sluggish and apathetic.

Starch slowed down the two active rats. In three weeks they had almost doubled their weight from eating nothing but breads, pastas, cereals, potatoes and beans. Their fur became very oily and they often shivered and seemed to be cold.

But the two eating Type A lunches thrived. They had small weight gains—attributed to growth—and their fur was glossy without being oily. Their activity increased and they were more playful than the other three.

Worried about the excessive weight loss by the rat on the diet of sugar, the students switched him to the Type A lunch. The two started on the balanced diet were changed to sugar.

Weight graphs showed the one switched to a balanced diet began gaining back some of the weight it had lost while the two changed to sugar had leveled off and started downward.

A typical observation at lunch time found the rat changed to the Type A lunch from sugar ignoring dessert completely to gobble fresh orange slices, burritos, carrot sticks and milk. The starch eaters appeared to enjoy their corn, taco chips, banana and french fries.

But the two switched from the balanced diet to sugar obviously were disgruntled with cream-filled chocolate cake and marshmallow bars. They nibbled part of a banana and then sulked at the far side of their cage, where they could watch the rat eating the Type A lunch.

Only four girls handled the rats which were taken home on the weekends so the diet program wasn't interrupted. All members of the class participated in the nutrition project by keeping daily records of what they themselves ate, totaling their caloric intake and computing the type of foods they were consuming. They also weighed in and kept a record of gains and losses.

ENRICHMENT

Concept B & D

Fifth Grade
Subject Area: Health
Social Studies
Science

12

WHAT DO VEGETARIANS EAT?

Behavioral Objective: The student will define the term "vegetarian" as a person who does not eat meat and list two non-meat protein substitutes vegetarians eat.

Process Objective: Grouping, identifying common properties, abstracting, openmindedness with respect to new ideas and situations of conflict.

Teacher Information: Vegetarians do not eat meat although some do eat animal products. There are many forms of vegetarian diets; the two most common are Milk-Egg (lacto-ovo) vegetarians and Strict Vegetarians (Vegans). By combining vegetables, fruits, grains, nuts, and seeds correctly Vegans can eat adequately except for B_{12} which is found only in animal products. Supplements are usually taken. Lacto-Ovo vegetarians eat milk and eggs and consume a well balanced diet if correctly chosen. Because plant proteins are "incomplete", i.e. lacking in some animo acids, vegetarians make an effort to eat proteins that "complement" one another, or make up in amino acid content what is missing in another food. Non meat foods which are high protein include milk, cheese, eggs, nuts, legumes, seeds, and grains. Legumes are seeds from pods, e.g. beans, peas, soybeans, peanuts, garbanzos.

Materials: Food Group Posters: Milk and Meat, Dairy Council of Calif.
Sound filmstrip: Vegetarianism in a Nutshell

Vocabulary: vegetarian, amino acid, proteins, meat substitute, complementary protein, legumes

ACTIVITY

Motivation:

Show the filmstrip "Vegetarianism in a Nutshell" to the class.

Development:

1. Following the filmstrip have the students read "What's a Vegetarian?" student worksheet and complete the accompanying questions. Discuss student responses.

Evaluation:

Have the students complete the "Vegetarianism in a Nutshell" worksheet.

Additional Activities:

1. Assign students to research countries where meat is not easily available and to find out why and report to class.

2. Prepare a complementary protein recipe in class - e.g. burritos from beans and corn tortillas.

Additional Resources:

Reference Books: Diet For a Small Planet by Frances Moore Lappe

Includes discussion of ecological rationale for reducing animal protein intake and recipes for complementary protein dishes.

Laurel's Kitchen : A Handbook for Vegetarian Cooking and Nutrition, by Robertson, L. et.al., Nilgiri Press, Berkeley, CA, 1976.

Recipes and rationale for vetarian diet plus nutrition content of vegetarian foods.

Realities of Nutrition by Deutsch, R.M., Bull Pub. Co., Palo Alto, CA., 1976.

General nutrition information on all aspects of health and diet. Includes short section on vegatarian diets.

Filmstrip: "The People Problem: Feeding the World Family" SFS 330.9 (Dist IMC) Teacher's guide, Cassette, Filmstrip, 6 activity sheets,

Presents the world food problems but does not suggest solutions. Good as introduction to ecological ways of eating, e.g. vegetarianism.

Film: "Diet for a Small Planet"

Explains reasons for choosing to be a vegetarian and explains protein combining to make high quality protein diets.

(Available on free loan from Food and Nutrition Information Center through the Nutrition Project Staff of the District)

NAME ______________________

WHAT'S A VEGETARIAN?

DO YOU EAT MEAT, FISH, AND EGGS? DO YOU DRINK MILK? ALL OF THESE FOODS COME FROM ANIMALS.

VEGETARIANS ARE PEOPLE WHO, FOR ONE REASON OR ANOTHER, DO NOT EAT MEAT. SOME VEGETARIANS DO NOT EAT ANY FOOD THAT COMES FROM AN ANIMAL.

THE WORD "VEGETARIAN" COMES FROM THE WORD "VEGETABLE" EVEN THOUGH VEGETARIANS EAT THINGS BESIDES VEGETABLES. THEY LIKE TO EAT BREADS, GRAINS, BEANS, PEAS, NUTS, AND FRUIT PLUS CHEESE, MILK, AND EGGS.

BECAUSE VEGETARIANS DO NOT EAT MEAT, THEY HAVE TO BE CAREFUL TO EAT OTHER HIGH PROTEIN FOODS. THEY EAT CHEESE, BEANS, DRIED PEAS, SEEDS, AND NUTS FOR PROTEIN. BREADS AND CEREALS PROVIDE ENERGY. FRUITS AND VEGETABLES SUPPLY IMPORTANT VITAMINS AND MINTERALS. CALCIUM COMES FROM CHEESE AND MILK.

FILL IN THE MISSING WORDS:

1. PEOPLE WHO ARE VEGETARIANS DO NOT EAT ___________.

2. TO GET PROTEIN VEGETARIANS EAT ______________________________.

3. FOR ENERGY VEGETARIANS EAT ___________________________________.

4. FRUITS AND VEGETABLES PROVIDE ___________ AND ___________.

5. MILK AND CHEESE PROVIDE _________________ FOR STRONG TEETH AND BONES.

BEANS
PEANUT BUTTER
CEREAL
59

San Mateo City Schools, CA Dept. of Ed.

NAME ______________________

VEGETARIANISM IN A NUTSHELL

CAN YOU ANSWER THESE QUESTIONS ABOUT VEGETARIANISM?

1. WHAT IS ONE FOOD A VEGETARIAN WOULD NOT EAT? ______________

2. CAN YOU NAME THREE REASONS WHY PEOPLE EAT VEGETARIAN FOODS?

____

____

____

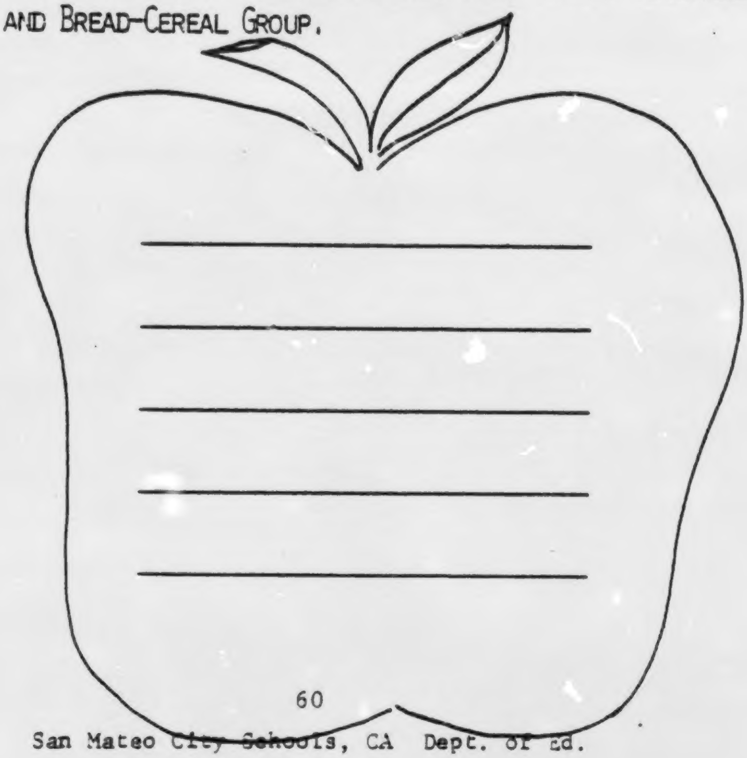
3. WHAT ARE THREE HIGH-PROTEIN FOODS THAT A VEGETARIAN CAN EAT?

____

____

____

4. PLAN A VEGETARIAN MEAL THAT HAS ALL FOUR FOOD GROUPS. BE SURE YOUR MEAL HAS SOMETHING FROM THE MILK GROUP, MEAT GROUP, VEGETABLE-FRUIT GROUP, AND BREAD-CEREAL GROUP.



ENRICHMENT

Fifth Grade
Subject Area: Math
Social Studies (Art)

13

HOW CAN YOU HELP? (FOOD WASTE)

Behavioral Objective: The student will identify two examples of food waste and suggest ways he/she can reduce food waste at home and at school.
The student will calculate the cost of food thrown away both in monetary and nutrient terms.

Process Objective: Skill in analyzing and improving group processes, understanding the factors that affect social behavior; ability to see alternative points of view and their rationale.

Teacher Information: Food waste occurs many ways: overbuying, over cooking, letting food spoil, throwing food away. Primary students discard up to 30% of their school lunch by throwing it away. A study of food waste as a result of allowing food to spoil and throwing food away at lunch is within the primary students control so it is these areas to which this lesson is addressed.

Materials: Sound Filmstrip: "People Problem: Feeding the World Hungry"
District IMC (recommended)

Several lunch bags and trays collected from trash after lunch
Art paper, crayons
"What's Wrong with Wasting Food?" student worksheet

Vocabulary: food waste, monetary, calculate

ACTIVITY

Motivation:

Show the filmstrip "People problem: Feeding the World Hungry", if possible and discuss the implications.

After lunch, take several bags from the trash can and, without comment, put the discarded food on display. Discuss the implications of wasting food - children didn't get the good nutrition, money is wasted, people who fixed the food worked hard, etc. Explain that over the next few days the class will learn about food wasted at school.

Re-introduce the topic of waste the next morning. Ask children to observe and report back to class how food is wasted in the lunch area. How much food was wasted? What kinds of foods were thrown away?

Development:

1. Make a list of several ways food can be wasted. For each way food is wasted, ask children to suggest something they could do to prevent waste. (food is wasted by taking too much, throwing food away, buying too much and letting it spoil, improper cooking, not putting foods away in the proper place, etc.).

2. Have students complete the Student Worksheet 'What's Wrong with Wasting Food?.

Math practice based on food waste costs and nutrition information are included in this student worksheet. Give each student a copy. Go over the first question with students. Discuss each question when students finish.

Evaluation:

1. Ask students to name two examples of food waste and suggest methods to reduce waste.

2. Set up a display of discarded food and ask students to calculate the loss (a) in nutrients (b) in money.

Additional Activities:

Operation Clean Plate: As a class project, draw posters to decorate the cafeteria as part of a clean plate campaign. Slogans such as "Food gives you energy - don't waste it," "Food costs a lot - don't waste it" could be made up for a contest.

As a special assignment students can figure the amount of food wasted in the cafeteria and figure the cost of the waste. Because the waste is highest in the milk and fruit-vegetable categories these could be selected for study. Prices of food items should be based on grocery store prices.

NAME ____________________

WHAT'S WRONG WITH WASTING FOOD?

FOOD WASTE COSTS MONEY

FOOD WASTE IS EXPENSIVE! FIGURE OUT HOW MUCH THESE EXAMPLES OF FOOD WASTE COST:

1. ORANGE JUICE BARS COST 20¢ EACH. HOW MUCH DOES IT COST TO BUY 100 ORANGE JUICE BARS? ____________________
2. IF HALF OF THE 100 ORANGE JUICE BARS ARE THROWN AWAY, HOW MUCH MONEY IS WASTED? ____________________
3. IF MILK COSTS 10¢ PER CARTON, HOW MUCH MONEY IS WASTED IF 15 STUDENTS THROW ALL OF THEIR MILK AWAY? __________
4. HOW MUCH MONEY IS WASTED IF 100 STUDENTS THROW HALF OF THEIR MILK AWAY? ____________________
5. IT COSTS ABOUT 15¢ TO MAKE ONE SERVING OF APPLE-WALNUT SALAD. IF 100 STUDENTS EAT IN THE CAFETERIA, HOW MUCH DOES IT COST TO MAKE ALL THE SALAD? ____________________
6. HOW MUCH MONEY IS WASTED IF HALF OF THE STUDENTS DON'T EAT THE SALAD? ____________________

WASTING GOOD NUTRITION

WASTING FOOD IS A WASTE OF GOOD NUTRITION. WHAT NUTRIENTS ARE WASTED IF THESE FOODS ARE THROWN AWAY? CHOOSE FROM THESE NUTRIENT WORDS:

VITAMIN C PROTEIN CALCIUM CARBOHYDRATE FAT

1. ORANGE JUICE BAR ____________________
2. MILK ____________________
3. BREAD ____________________
4. BUTTER ____________________
5. MEAT ____________________

HOW DOES MILK KEEP YOU HEALTHY? ____________________

WHY DO YOU THINK MILK IS SERVED EVERY DAY AT SCHOOL? ____________________

San Mateo City Schools, CA Dept. of Ed.

ENRICHMENT

Fifth Grade
Subject Area: Science

YOU AND YOUR 5 SENSES

Behavioral Objective: After completing the activities the student will identify the role of the five senses in the identification of food.

Process Objective: Interpretation of data, identifying points, differentiating.

Teacher Information: Students have been introduced to the five senses in earlier grades. This series of activities is more independent and involves a scientific approach.

This activity series requires some preparation and materials gathering, but is worth the effort. The activities can be done over a one week period. The activities can be rearranged.

Materials: "Sensorama" Poster (Project SNAC)

"Food and Your Senses" booklet (7 pages) - 1 per student

Filmstrip: "You and Your Sense of Smell, and Taste", Walt Disney Media (Project SNAC)

Activity 1 - "Sense of Taste"
unsweetened chocolate, lemon juice, salt, sugar, toothpicks

Activity 2 - (Homework) "Sense of Smell and Taste" worksheet

Activity 3 - "Sense of Smell"
bottles filled with food samples for students to smell. Number each bottle and cover each with paper.

Activity 4 - "Sense of Touch"
a hard food (peanuts - 1 per student), a soft food (applesauce) water and cups, a crisp food (carrots)

Activity 5 -"Sense of Hearing"

Popcorn, oil, popper

Activity 6 -"Sense of Sight"
Applesauce or milk with blue food color.

Vocabulary: Senses, taste, sight, smell, touch, hearing, texture, temperature, sensory

ACTIVITY

Motivation:

Display the "Sensorama" poster.

Introduce the senses through discussion about how we know what is happening around us and to us. Explain that each sense will be explored over the next few days.

Pass out "Food and Your Senses" to each student to keep until the activity is completed.

Development:

Activity 1 "Sense of Taste"

Set up 4 tasting stations with each food name. Write the names of the four tastes, (sweet, sour, salt, bitter) and turn face down in front of matching food samples. Assign students to go through the stations in groups of 4 or 5. The chocolate can be shaved with a sharp knife. The lemon juice can be tasted on a toothpick as can the salt and sugar.

Activity 2 (homework) "Sense of Smell and Taste"

Show the filmstrip after the homework assignment for maximum impact.

Sense of smell and taste can be done in class if preferred in which case you will need small amounts of mild onion and apple.

Activity 3 "Sense of Smell"

Tell the class "you can use your nose only today. That's why the bottles are covered up. Don't peek at the food. When everyone is finished we will see whose nose knows" After smelling the food complete the rest of the questions.

Activity 4 "Sense of Touch"

Any selection of foods which are made is fine as long as the foods are distinctly different in texture, temperature, and moisture content.

Activity 5 "Sense of Hearing"

To begin, have each student complete the top part of the worksheet. Then make a list of food related sounds which students suggest (snap, crunch, guzzle, fizz, pop, sizzle).

If desired, investigate the sounds of food by popping corn. The popcorn makes a rattling sound in a jar, it sizzles in the oil, it pops, and it crunches when eated.

Activity 6 "Sense of Sight"

Without comment, display the blue food as the students arrive. They will want to know what it is. List student suggestions. Ask a student to volunteer to taste it. Listen to student reaction and discuss. Have students complete the "sense of sight" worksheet.

For as long as interest holds, make a food available for tasting. You might assign one group per day to limit the number of samples needed. Suggested foods are raisins, peas in pods, smelly cheese.

Ask students to bring a food. Cocktail onions are loads of fun. Be sure to provide toothpicks.

Evaluation:

Ask students to imagine what it would be like to have only four senses (one of their senses would be missing) and to write a story about life with only four senses.

Additional Activity:

1. Put dried noodles, nuts, etc. in mystery "feel box" and have students vote on what they think is inside.
   (Mystery box - coffee can with sock over top)

2. Discuss the idea of "sensory compensation": that is, how other senses become more acute when one sense is missing. An example is the sharp hearing many blind people have.

3. Make a USE YOUR FIVE SENSES Activity Center. Have students bring samples of foods for tasting. (Layout for center attached)

Name ______________________________

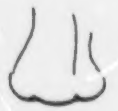
Food and Your Senses

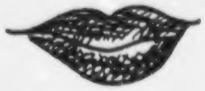
How food tastes to you depends upon four of your senses...taste, smell, sight and touch.

Did you know that many foods are tasteless without your sense of smell? Your tongue has taste buds so you can taste salty, sweet, bitter, or sour foods. But most flavors are a combination of taste and smell.

How food looks helps you enjoy it, too. After all, would you eat green hamburger, purple potatoes, or blue milk?

How foods feel in your mouth is important too. Some foods are soft, some are hard. Some are wet and some are dry. Some are hot and some are cold.





Sense of touch

Even the sound a food makes when you eat it makes it taste better. You probably like crunchy popcorn, celery, apples, and potato chips. The sound of corn popping might make you hungry. Sometimes, the sound of someone slurping soup or chewing with his mouth open may take away your appetite.

Everyone is different and what you like to eat may not be what your friends or family likes to eat.

This record book is for you...to answer questions about food and your senses. Enjoy your food.

San Mateo City Schools, CA Dept. of Ed.

NAME ____________________

YOUR SENSE OF TASTE

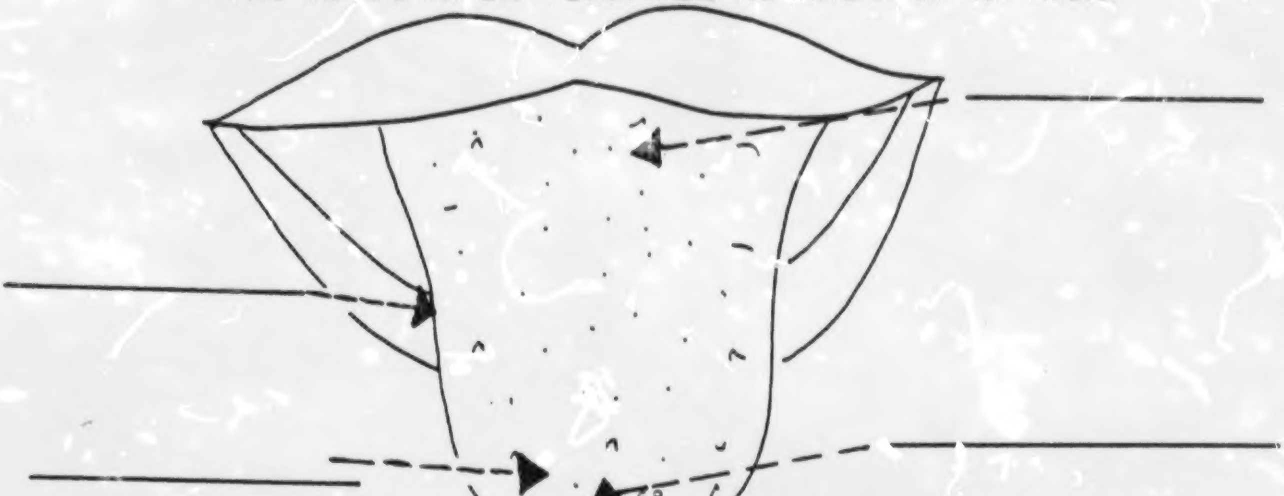
WITH YOUR TONGUE YOU CAN FIND OUT A LOT ABOUT A FOOD. YOU HAVE PROBABLY TASTED FOODS YOU LIKED RIGHT AWAY AND SOME YOU DIDN'T LIKE AT ALL. DID YOU EVER STOP TO THINK HOW YOUR TONGUE WORKS? YOU WILL BE ABLE TO "MAP" YOUR TONGUE TO FIND OUT WHERE THE DIFFERENT TASTES ARE.

YOUR TONGUE IS COVERED WITH TASTE BUDS THAT PICK UP ONE TASTE BETTER THAN OTHERS.

HERE IS WHAT YOU WILL TASTE:

1. SOMETHING SWEET ____________________
2. SOMETHING SALTY ____________________
3. SOMETHING SOUR ____________________
4. SOMETHING BITTER ____________________

WRITE THE WORD FOR EACH FLAVOR WHERE YOU TASTE IT ON YOUR TONGUE.



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NAME ______________________

WHAT A TEAM WE MAKE!!

TASTE AND SMELL TOGETHER..........

TO FIND OUT HOW YOUR SENSES OF TASTE AND SMELL WORK TOGETHER DO THESE EXPERIMENTS AT HOME.......

TASK #1

YOU WILL NEED: 2 PIECES OF MINT FLAVORED CANDY.

HERE'S WHAT TO DO: TASTE THE MINT. CAN YOU SMELL IT WHEN YOU BREATHE, TOO? TAKE THE MINT OUT OF YOUR MOUTH. NOW HOLD YOUR NOSE SHUT AND TRY TO TASTE THE MINT. DESCRIBE WHAT HAPPENED.

TRY THE SAME EXPERIMENT WITH SOME OTHER FLAVORS.

TASK #2

YOU WILL NEED: 1 SMALL PIECE OF ONION
1 SLICE OF APPLE
A HELPER
A BLINDFOLD

HERE'S WHAT TO DO:

1. PUT THE BLINDFOLD ON. HAVE YOUR HELPER GIVE YOU EITHER THE APPLE OR THE ONION. TASTE IT AND TELL WHAT YOU THINK IT IS. TASTE THE OTHER FOOD.
2. ASK YOUR HELPER TO GIVE YOU ONE OF THE FOODS WITHOUT TELLING YOU WHICH ONE. HOLD YOUR NOSE AND TASTE THE FOOD. CAN YOU TELL WHICH ONE IT IS? TASTE THE OTHER FOOD WITH YOUR NOSE STILL SHUT.
3. WHEN IS IT EASIER TO TELL WHAT YOU ARE EATING?
4. WHY DO YOU THINK FOOD DOESN'T TASTE AS GOOD WHEN YOU HAVE A COLD?

San Mateo City Schools, CA Dept. of Ed.

NAME ____________________________

YOUR NOSE KNOWS

SENSE OF SMELL

DIRECTIONS:

OPEN EACH BOTTLE AND SMELL. WRITE WHAT YOU THINK EACH SMELL IS NEXT TO THE MATCHING NUMBER.

1. ____________________ 4. ____________________

2. ____________________ 5. ____________________

3. ____________________ 6. ____________________

WHICH OF THE SMELLS DID YOU LIKE? ______________________________

WHY? ____

____

WHAT SMELLS WOULD YOU MISS THE MOST IF YOU LOST YOUR SENSE OF SMELL?

____

____

____

HAVE YOU EVERY SMELLED SPOILED FOOD? ___________________________

HOW DO YOU THINK YOUR SENSE OF SMELL WOULD KEEP YOU FROM EATING SPOILED FOOD? ____

____

NAME ______________________________

SENSE OF TOUCH

HOW FOOD FEELS IN YOUR MOUTH IS IMPORTANT.

TASTE EACH FOOD OR DRINK AND WRITE WORDS TO DESCRIBE HOW IT FEELS IN YOUR MOUTH.

HERE ARE SOME WORDS YOU CAN USE:

HARD	COLD	WET	CRISP	SMOOTH
SOFT	HOT	DRY	OILY	ROUGH

	FOOD OR DRINK	HOW IT FEELS IN YOUR MOUTH (USE AS MANY WORDS AS YOU CAN)
1.		
2.		
3.		
4.		
5.		

TASTE SOME FOODS AT HOME TO FIND OUT HOW SOME DIFFERENT FOODS FEEL.

HERE ARE SOME IDEAS OF FOODS YOU CAN TASTE AND COMPARE AT HOME:

TOAST AND PLAIN BREAD

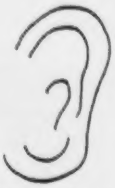
MASHED POTATO AND RAW POTATO

PEANUTS AND PEANUT BUTTER

DID YOU KNOW THAT COOKING FOOD SOMETIMES MAKES IT TASTE DIFFERENT JUST BECAUSE IT FEELS DIFFERENT ON OUR TONGUE?

NAME ______________________________

SENSE OF HEARING



BEFORE YOU TEST YOUR SENSE OF HEARING ON FOOD, LISTEN TO THE SOUNDS AROUND YOU FOR ONE MINUTE. MAKE A LIST OF AT LEAST TEN SOUNDS YOU HEAR.

1. ______________________ 6. ______________________

2. ______________________ 7. ______________________

3. ______________________ 8. ______________________

4. ______________________ 9. ______________________

5. ______________________ 10. ______________________

WHAT SOUNDS ARE MADE WHEN YOU POP CORN? LIST ALL YOU CAN THINK OF.

____

WHAT ARE THREE CRUNCHY FOODS?

1. ______________________

2. ______________________

3. ______________________

-Hot-
Popcorn

WHAT SOUND DOES WATER MAKE WHEN YOU SWALLOW IT?

____

NAME ______________________________

SENSE OF SIGHT

SOMETIMES YOU KNOW WHAT A FOOD IS EVEN IF YOU CAN'T TASTE IT, TOUCH IT, OR SMELL IT. YOUR EYES TELL YOU A LOT ABOUT A FOOD.

CAN YOU TELL THESE FOODS APART WITH YOUR SENSE OF SIGHT?

APPLE

ICE CREAM CONE

1. WRITE WORDS THAT DESCRIBE HOW THESE FOODS LOOK.

APPLE: ______________________________

ICE CREAM CONE: ______________________________

2. NAME SOME FOODS THAT MAKE YOU HUNGRY JUST BECAUSE THEY LOOK SO GOOD.

____

____

____

____

3. WHAT WORDS CAN YOU USE TO TELL HOW THESE FOODS LOOK:

PANCAKE: ______________________________

WATERMELON: ______________________________

USE YOUR FIVE SENSES

Activity Center Layout

YOU SEE   YOU SMELL   YOU TOUCH   YOU TASTE   YOU HEAR

Taste the food. Then write down words to describe how the food... Looks
Smells
Feels
Tastes
Sounds

Choose from these words and add your own.

Sight Words

- long
- short
- round
- square
- skinny
- fat

Smell Words

- moldy
- odorless
- rotten
- spicy
- sweat
- rancid

Touch Words

- smooth
- bumpy
- cold
- cool
- crisp
- dry
- wet
- greasy
- hairy
- juicy
- powdery
- soft
- hard
- slimy
- slippery
- sticky
- rough

Taste Words

- sour
- sweet
- salty
- bitter
- tasteless
- yummy
- yucky
- spicy
- sugary
- delicious
- bland
- peppery
- tangy

Sound Words

- fizz
- loud
- pop
- squeak
- slurp
- crunch
- crackle
- quiet

Pocket for
tasting reaction
sheets

Today's Food is ________

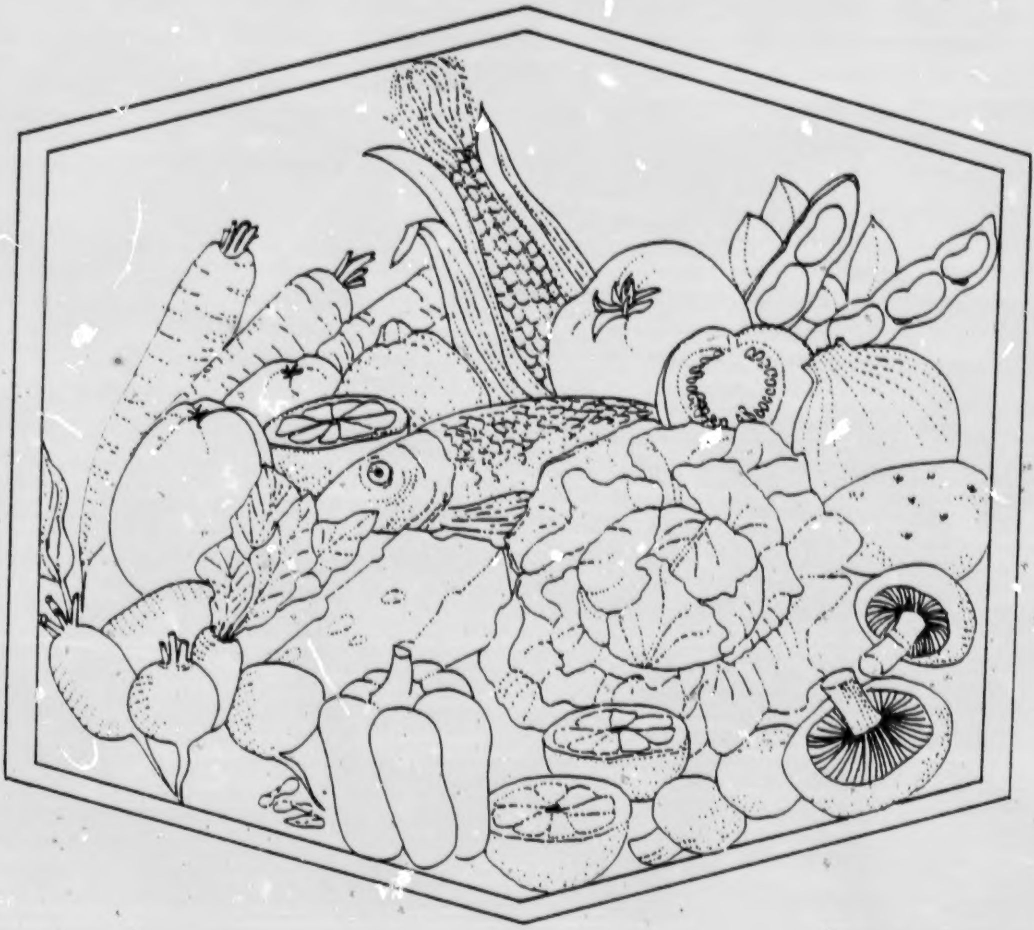
It is from the
________________ Group.

Sample Food

San Mateo City Schools, CA Dept. of Ed.

WORKSHEET ANSWER KEYS

Answer keys for the worksheets in the previous lessons have been reduced in size and arranged four to a page in sequential order. Each answer has the same title and page number as the original worksheet used in the lesson.



NAME ANSWER KEY

FANTASTIC VOYAGE

YOUR MOUTH

DIGESTION IN THE MOUTH CONSISTS MAINLY OF BREAKING DOWN FOOD SO IT CAN BE USED BY THE BODY. HOW DO WE DO THIS? CHEW IT

SALIVA ALSO CONTAINS AN ENZYME WHICH BEGINS TO BREAK DOWN STARCH. WHAT IS YOUR TONGUE FOR? TASTING

YOUR FOOD TUBE

FOOD TRAVELS THROUGH A TUBE FROM YOUR MOUTH TO YOUR STOMACH. THIS TUBE IS CALLED THE ESOPHAGUS (E-SOF-A-GUS). WRITE "ESOPHAGUS" ON THE DIGESTIVE SYSTEM DIAGRAM. THE ESOPHAGUS USES MUSCLES TO SQUEEZE THE FOOD TO YOUR STOMACH. ONE NAME FOR THE MUSCLE SQUEEZING IS "PERISTALSIS."

YOUR STOMACH

DO YOU KNOW WHERE YOUR STOMACH IS? IT IS JUST ABOVE YOUR WAIST. YOUR STOMACH IS LIKE A SACK MADE OF MUSCLES. THE MUSCLES SQUEEZE THE FOOD UNTIL IT IS BROKEN APART. SPECIAL JUICES CALLED "ENZYMES" AND HYDROCHLORIC ACID IN THE STOMACH BREAK THE FOODS APART EVEN FURTHER SO IT CAN TRAVEL ON TO YOUR SMALL INTESTINE. A FAVORITE SOUP IN MEXICO IS MADE WITH THE LINING OF A COW'S STOMACH WHICH IS CALLED "TRIPE." ASK YOUR BUTCHER IF YOU CAN SEE SOME TRIPE.

YOUR SMALL INTESTINE

YOUR SMALL INTESTINE IS A LONG, SKINNY TUBE, ABOUT 20 FEET LONG, THAT IS ALL COILED UP. MOST OF THE DIGESTION HAPPENS IN YOUR SMALL INTESTINE. FOOD IS ABSORBED FROM THE SMALL INTESTINE INTO YOUR BLOOD STREAM SO THAT IT CAN BE CARRIED TO THE REST OF YOUR BODY. WHAT OTHER THINGS DOES YOUR BLOOD CARRY? OXYGEN, VITAMINS, MINERALS

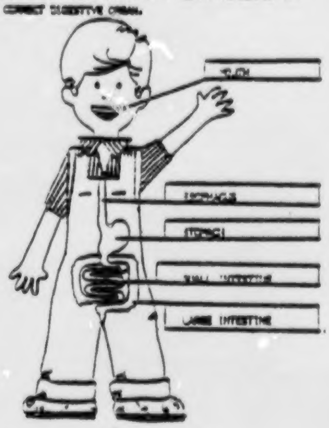
ANSWER KEY

YOUR LARGE INTESTINE

YOUR LARGE INTESTINE IS YOUR FOODS' LAST STOP ON ITS FANTASTIC VOYAGE. WHAT DOES YOUR LARGE INTESTINE DO?

CONCENTRATES FOOD RESIDUE BY ABSORBING WATER FROM IT FOR EVACUATION

BELOW IS A DIAGRAM OF THE DIGESTIVE TRACT. FILL IN THE BLANKS WITH THE NAME OF THE CORRECT DIGESTIVE ORGAN.



NAME ANSWER KEY

CALORIE COUNTING

1. LOOK UP THE WORD CALORIE AND WRITE THE DEFINITION. USE THE RESOURCE BOOKLETS.

A CALORIE IS A MEASURE OF THE ENERGY IN YOUR FOOD.

2. FIND OUT HOW MANY CALORIES YOUR BODY NEEDS EVERY DAY. LOOK ON PAGE 18 OF MR. PEANUT'S GUIDE. WRITE IT HERE.

AGES 7 - 9: 2300 CALORIES
(60 LBS)

AGES 10 - 12: 2400 - 2500 CALORIES
(79 LBS) (GIRLS) (BOYS)

NOW YOU CAN PLAN A DAY'S FOODS THAT WILL GIVE YOU THE AMOUNT OF CALORIES, OR FOOD ENERGY, THAT YOUR BODY NEEDS EVERY DAY.

TO PLAN YOU DAY'S FOOD, BE SURE TO CHOOSE A 3-2-4-4 MENU. THAT MEANS:

3 SERVINGS - MILK GROUP
2 SERVINGS - MEAT GROUP
4 SERVINGS - VEGETABLE-FRUIT GROUP
4 SERVINGS - BREAD-CEREAL GROUP

PAGE 18-19 OF MR. PEANUT'S GUIDE IS A CALORIE CHART.

NAME ANSWER KEY

3-2-4-4 MENU

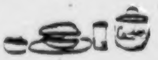
ANSWERS WILL VARY

BREAKFAST FOODS

SAMPLE:
ORANGE JUICE
CREAM OF WHEAT
1 SLICE TOAST, BUTTER
MILK

LUNCH FOODS

HAMBURGER SANDWICH
COLE SLAW
COOKIE
MILK



DINNER FOODS

ROAST CHICKEN
MASHED POTATOES, GREEN BEANS
TOSSED GREEN SALAD WITH DRESSING
CHOCOLATE PUDDING, MILK
1 SLICE BREAD, BUTTER

SNACKS

PEANUTS

CHECK YOUR MENU. IS IT A 3-2-4-4 DAY? YES

WHAT IS THE TOTAL CALORIES? 2215

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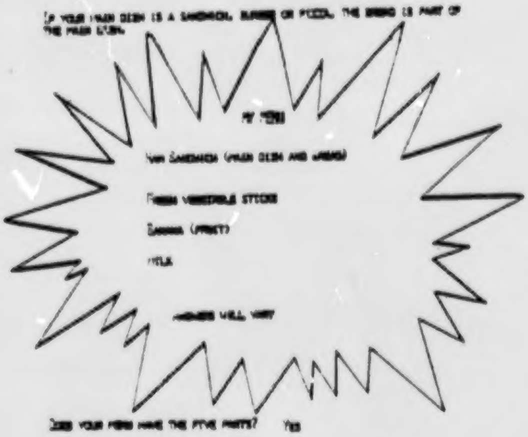
NAME Answer Key

LUNCH MENU CONTEST

RULES: WRITE A "TYPE A" LUNCH MENU THAT HAS ALL THESE PARTS:

1. MAIN DISH (MEAT-PROTEIN)
2. VEGETABLE (RAW OR COOKED)
3. BREAD OR ROLL
4. FRUIT
5. CARTON OF MILK

IF YOUR MAIN DISH IS A SANDWICH, BURGER OR PIZZA, THE BREAD IS PART OF THE MAIN DISH.



MY MENU

Ham Sandwich (main dish and bread)

Fresh vegetable sticks

Banana (fruit)

Milk

Answers will vary

DOES YOUR MENU HAVE THE FIVE PARTS? Yes

NAME Answer Key

ENERGY FOR LIFE SELF TEST

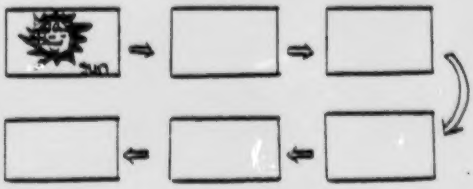
READ ENERGY FOR LIFE AND FILL IN THE MISSING WORDS.

1. FOOD COMES FROM THE ENERGY OF THE sun
2. SUGAR IS MADE IN PLANTS ONLY IN THE leaves
3. ANOTHER NAME FOR THE MAKING OF FOOD BY GREEN PLANTS IS photosynthesis
4. SUGAR GIVES US QUICK energy
5. IN SOME PLANTS SUGAR IS STORED IN THE FORM OF starch.
6. FATS AND OILS GIVE US energy AND KEEP US warm
7. PLANTS USE MINERALS FROM THE SOIL AND SUGAR TO MAKE protein

YOU ARE A PART OF MANY FOOD CHAINS. WRITE OR DRAW A FOOD CHAIN WITH THREE OR MORE PARTS. BEGIN WITH THE SUN AND END WITH AN ANIMAL OR A PERSON.

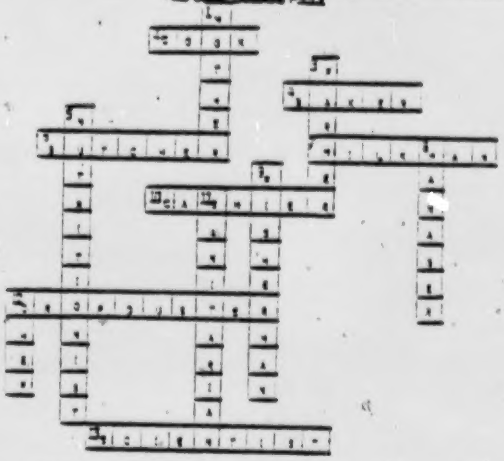
IF YOU NEED MORE THAN THREE SPACES, FOLLOW THE ARROWS.

Answers will vary



NAME Answer Key

FOOD CAREER CROSSWORD PUZZLE



WHAT DO WE CALL THE PERSON WHO . . . .

ACROSS

2. PREPARES SCHOOL LUNCHES?
4. MAKES BREAD, CAKES, AND COOKIES?
6. CUTS MEAT AT THE GROCERY STORE?
7. BRINGS MILK TO THE STORE OR TO YOUR HOUSE?
10. COLLECTS MONEY FOR FOOD AT THE STORE?
12. FLIES A PLANE TO SPRAY THE FARMERS CROPS?
13. INVENTS NEW FOODS AND TESTS FOODS?

DOWN

1. COOKS FOOD AT HOME?
3. GROWS OUR FOOD?
5. TEACHES PEOPLE ABOUT GOOD FOOD HABITS?
8. IS IN CHARGE OF THE WHOLE GROCERY STORE?
9. CATCHES TROUT AND TUNA?
11. CHECKS RESTAURANTS TO MAKE SURE THE FOOD IS SAFE AND CLEAN?
12. COOKS FOOD IN A RESTAURANT?

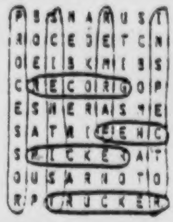
NAME Answer Key

FOOD CAREERS

MANY PEOPLE WORK IN JOBS THAT HAVE SOMETHING TO DO WITH FOOD. FIND THE JOB TITLES OF SOME FOOD WORKERS BY LOOKING UP, DOWN, AND ACROSS.

FIND THESE JOB TITLES:

INSPECTOR, FARMER, CHEF, SCIENTIST, GROCER, TRUCKER, PICKER, PROCESSOR



P S S N A R U S I
R O C E J E T C N
O E I S K M I S S
C R E C O R G O P
E S N E R A S [illegible] E
S A T W I F E H C
S P I C K E R A T
O U S A R N O T O
R P T R U C K E R

COMPLETE THESE SENTENCES WITH THE CORRECT JOB TITLE:

1. THE farmer GROWS FRUITS AND VEGETABLES.
2. THE picker WORKS IN FRUIT ORCHARDS AND VEGETABLE FIELDS.
3. THE trucker TAKES THE FOOD TO THE FACTORY.
4. AN inspector CHECKS THE FOOD TO MAKE SURE IT IS CLEAN AND SAFE.
5. THE scientist DEVELOPS NEW TYPES OF FOOD.
6. THE processor PACKAGES FOODS FOR THE MARKET.
7. FOOD IS SOLD BY THE grocer
8. THE chef COOKS FOOD IN RESTAURANTS.

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NAME [illegible]

CEREAL LABELS

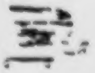
DIRECTIONS: READ THE NUTRITION LABEL FOR CHEERIOS.

1. WHAT KIND OF GRAIN IS CHEERIOS MADE FROM? OATS - WHEAT
2. HOW MANY OUNCES DOES ONE SERVING OF CHEERIOS WEIGH? 1 oz.
3. HOW MANY CUPS IS ONE SERVING OF CHEERIOS? 1¼ cup
4. HOW MANY CALORIES ARE IN ONE SERVING OF CHEERIOS? 110
5. HOW MANY GRAMS OF CARBOHYDRATE ARE IN ONE SERVING OF CHEERIOS? 20

READ THE NUTRITION LABEL ON SUGAR SMACKS AND RICE KRISPIES. THEN FILL IN THESE ANSWERS.

1. ONE SERVING OF SUGAR SMACKS IS HOW MANY CUPS? 3/4 cup
2. RICE KRISPIES AND SUGAR SMACKS HAVE VITAMINS AND MINERALS ADDED. HOW MANY ARE ADDED? 12, 12
3. WHICH CEREAL IS SUGAR-COATED? SUGAR SMACKS
4. WHICH CEREAL IS MADE WITH MORE SUGAR? SUGAR SMACKS
   (READ THE INGREDIENTS. THE CEREAL WITH SUGAR LISTED FIRST HAS MORE SUGAR.)
5. WHICH BOX OF CEREAL WEIGHS MORE—RICE KRISPIES OR SUGAR SMACKS? SUGAR SMACKS
   HOW MUCH MORE DOES IT WEIGH? 3 oz.
6. DOES THE CEREAL HAVE MORE OR LESS CALCIUM WHEN MILK IS ADDED? MORE
   WHY? CALCIUM IN MILK

NAME ANSWER KEY



READ THE LABEL

NUTRITION LABELS TELL YOU HOW MUCH NUTRITION IS IN THE FOOD YOU EAT.

1. FIND THE TWO SUGAR FROSTED CEREAL LABELS. LOOK AT THE SECTION THAT TELLS ABOUT NUTRIENTS. ARE THE NUMBERS FOR PROTEIN THE SAME FOR EACH BOX? YES WHICH HAS MORE IRON? KELLOGG'S
2. HOW MUCH FAT DOES ONE KELLOGG'S FROSTED POP TART GIVE YOU? 5 gms.
   DOES IT GIVE YOU MORE FAT OR LESS FAT THAN ONE SERVING OF KELLOGG'S RICE KRISPIES? MORE FAT
3. COMPARE THE PROTEIN IN RICE KRISPIES AND CHEERIOS. WHICH CEREAL HAS MORE PROTEIN? CHEERIOS
4. DOES KELLOGG'S RAISIN BRAN HAVE ANY VITAMIN C IN IT? NO
   WHICH OF THE FOUR FOOD GROUPS IS KNOWN FOR VITAMIN C? FRUITS AND VEGETABLES
5. LOOK AT THE DEL MONTE PINEAPPLE CHUNKS LABEL. WHAT VITAMIN IS THE HIGHEST? VITAMIN C AND B₁ SAME
6. READ THE GLORIETTA STEWED TOMATOES LABEL. HOW BIG IS ONE SERVING? 1 cup TOMATOES ARE IN WHICH FOOD GROUP? FRUITS AND VEGETABLES
7. WHAT ARE THE TWO VITAMINS WITH THE LARGEST NUMBER IN SAN BENITO TOMATO SAUCE? VITAMIN A VITAMIN C
8. FIND THE TOWN HOUSE CREAM OF MUSHROOM SOUP. FIND THE NUTRIENT CALCIUM. IS THERE MORE CALCIUM IN SOUP MADE WITH MILK? YES
   WHY? MILK IS HIGH IN CALCIUM

---

9. WHICH NUTRIENT IS THE HIGHEST IN THE CARNATION EVAPORATED MILK? CALCIUM HOW MUCH DOES IT HAVE? 50%
10. HOW MANY SERVINGS OF TUNA DOES ONE CAN OF STARKIST TUNA HAVE IN IT? 1 HOW MUCH PROTEIN IS IN ONE SERVING? 45 gms.
    HOW MUCH FAT? 2 gms.
    WHAT ARE THREE NUTRIENTS IN STARKIST TUNA THAT ARE 100 OR MORE?
    1. PROTEIN 2. NIACIN 3. VITAMIN B12

ANSWER KEY

ACTIVITIES:

LIST SOME FOODS THAT NEED TO BE EATEN WITH

A KNIFE MEAT

A FORK CAKE

A SPOON SOUP

LIST SOME FOODS EATEN WITH FINGERS SANDWICHES, COOKIES, CORN ON THE COB

HOW WOULD YOU PREPARE FOOD TO BE EATEN WITH CHOPSTICKS?

CUT INTO BITE-SIZED PIECES

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NAME ANSWER KEY

WHAT IS ADDED

DIRECTIONS:

1. WRITE THE NAMES OF FOUR FOODS THAT HAVE LABELS.
2. READ THE WHOLE LABEL ON EACH FOOD VERY CAREFULLY.
3. FILL IN THE ANSWERS TO THE QUESTIONS.

FOOD	DOES THE PACKAGE HAVE THE WORDS "ENRICHED" OR "FORTIFIED" ON IT?	WHAT DOES THE LABEL SAY HAS BEEN ADDED?

1. ANSWERS WILL VARY
2. ____________________
3. ____________________
4. ____________________

WHY DO FOOD COMPANIES ADD VITAMINS AND MINERALS TO SOME FOODS?

TO MAKE SURE CONSUMER GETS ENOUGH IN HIS FOOD

____

HINT: SOME FOODS THAT HAVE VITAMINS, MINERALS, OR PROTEIN ADDED ARE SALT, BUTTER, MARGARINE, MILK, BREAD, FLOUR, CEREAL, AND FRUIT DRINKS.

NAME ANSWER KEY

RAT EXPERIMENT RECORD SHEET

DATE	ANSWERS WILL VARY RAT A		RAT B	
	WEIGHT	PHYSICAL CONDITION	WEIGHT	PHYSICAL CONDITION
DAY 1				
END OF FIRST WEEK				
END OF SECOND WEEK				
END OF THIRD WEEK				
END OF FOURTH WEEK				
END OF FIFTH WEEK				
END OF SIXTH WEEK				

NAME ANSWER KEY

WHAT'S A VEGETARIAN?

DO YOU EAT MEAT, FISH, AND EGGS? DO YOU DRINK MILK? ALL OF THESE FOODS COME FROM ANIMALS.

VEGETARIANS ARE PEOPLE WHO, FOR ONE REASON OR ANOTHER, DO NOT EAT MEAT. SOME VEGETARIANS DO NOT EAT ANY FOOD THAT COMES FROM AN ANIMAL.

THE WORD "VEGETARIAN" COMES FROM THE WORD "VEGETABLE" EVEN THOUGH VEGETARIANS EAT THINGS BESIDES VEGETABLES. THEY LIKE TO EAT BREADS, GRAINS, BEANS, PEAS, NUTS, AND FRUIT PLUS CHEESE, MILK, AND EGGS.

BECAUSE VEGETARIANS DO NOT EAT MEAT, THEY HAVE TO BE CAREFUL TO EAT OTHER HIGH PROTEIN FOODS. THEY EAT CHEESE, BEANS, DRIED PEAS, SEEDS, AND NUTS FOR PROTEIN. BREADS AND CEREALS PROVIDE ENERGY. FRUITS AND VEGETABLES SUPPLY IMPORTANT VITAMINS AND MINERALS. CALCIUM COMES FROM CHEESE AND MILK.

FILL IN THE MISSING WORDS:

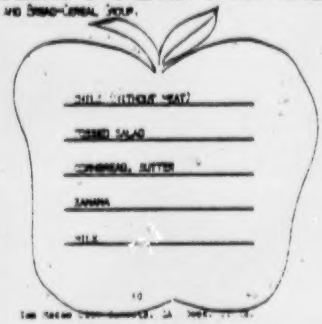
1. PEOPLE WHO ARE VEGETARIANS DO NOT EAT MEAT
2. TO GET PROTEIN VEGETARIANS EAT CHEESE, BEANS, PEAS, NUTS
3. FOR ENERGY VEGETARIANS EAT BREADS AND CEREALS
4. FRUITS AND VEGETABLES PROVIDE VITAMINS AND MINERALS
5. MILK AND CHEESE PROVIDE CALCIUM FOR STRONG TEETH AND BONES.

NAME ANSWER KEY

VEGETARIANISM IN A NUTSHELL

CAN YOU ANSWER THESE QUESTIONS ABOUT VEGETARIANISM?

1. WHAT IS ONE FOOD A VEGETARIAN WOULD NOT EAT? MEAT
2. CAN YOU NAME THREE REASONS WHY PEOPLE EAT VEGETARIAN FOODS?
   - RELIGION AGAINST EATING MEAT
   - [illegible]
   - EXPENSE OF EATING MEAT
   - DIETARY REASONS
3. WHAT ARE THREE HIGH-PROTEIN FOODS THAT A VEGETARIAN CAN EAT?
   - NUTS (PEANUT BUTTER)
   - LEGUMES (BEANS AND PEAS)
   - MILK, EGGS, CHEESE
4. PLAN A VEGETARIAN MEAL THAT HAS ALL FOUR FOOD GROUPS. BE SURE YOUR MEAL HAS SOMETHING FROM THE MILK GROUP, MEAT GROUP, VEGETABLE-FRUIT GROUP, AND BREAD-CEREAL GROUP.



CHILI (WITHOUT MEAT)
TOSSED SALAD
CORNBREAD, BUTTER
BANANA
MILK

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NAME ANSWER KEY

WHAT'S WRONG WITH WASTING FOOD?

FOOD WASTE COSTS MONEY

FOOD WASTE IS EXPENSIVE! FIGURE OUT HOW MUCH THESE EXAMPLES OF FOOD WASTE COST:

1. ORANGE JUICE BARS COST 22¢ EACH. HOW MUCH DOES IT COST TO BUY 100 ORANGE JUICE BARS? $22.00
2. IF HALF OF THE 100 ORANGE JUICE BARS ARE THROWN AWAY, HOW MUCH MONEY IS WASTED? $11.00
3. IF MILK COSTS 10¢ PER CARTON, HOW MUCH MONEY IS WASTED IF 25 STUDENTS THROW ALL OF THEIR MILK AWAY? $2.50
4. HOW MUCH MONEY IS WASTED IF 100 STUDENTS THROW HALF OF THEIR MILK AWAY? $5.00
5. IT COSTS ABOUT 15¢ TO MAKE ONE SERVING OF APPLE-WALNUT SALAD. IF 100 STUDENTS EAT IN THE CAFETERIA, HOW MUCH DOES IT COST TO MAKE ALL THE SALAD? $15.00
6. HOW MUCH MONEY IS WASTED IF HALF OF THE STUDENTS DON'T EAT THE SALAD? $7.50

WASTING GOOD NUTRITION

WASTING FOOD IS A WASTE OF GOOD NUTRITION. WHAT NUTRIENTS ARE WASTED IF THESE FOODS ARE THROWN AWAY? CHOOSE FROM THESE NUTRIENT NAMES:

VITAMIN C PROTEIN CALCIUM CARBOHYDRATE FAT

1. ORANGE JUICE BAR VITAMIN C
2. MILK CALCIUM, PROTEIN
3. BREAD CARBOHYDRATE
4. BUTTER FAT
5. MEAT PROTEIN

HOW DOES MILK KEEP YOU HEALTHY? GIVES YOU CALCIUM FOR STRONG BONES AND TEETH, ALSO PROTEIN AND VITAMINS

WHY DO YOU THINK MILK IS SERVED EVERY DAY AT SCHOOL? SO CHILDREN CAN GET PART OF THEIR DAILY REQUIREMENT

NAME ANSWER KEY

YOUR SENSE OF TASTE

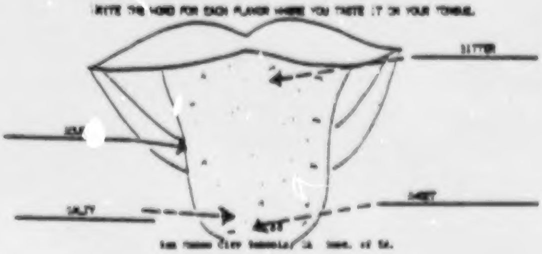
WITH YOUR TONGUE YOU CAN FIND OUT A LOT ABOUT A FOOD. YOU HAVE PROBABLY TASTED FOODS YOU LIKED RIGHT AWAY AND SOME YOU DIDN'T LIKE AT ALL. DID YOU EVER STOP TO THINK HOW YOUR TONGUE WORKS? YOU WILL BE ABLE TO "MAP" YOUR TONGUE TO FIND OUT WHERE THE DIFFERENT TASTES ARE.

YOUR TONGUE IS COVERED WITH TASTE BUDS THAT PICK UP ONE TASTE BETTER THAN OTHERS.

HERE IS WHAT YOU WILL TASTE:

1. SOMETHING SWEET SUGAR
2. SOMETHING SALTY SALT
3. SOMETHING SOUR LEMON JUICE
4. SOMETHING BITTER UNSWEETENED CHOCOLATE

WRITE THE WORD FOR EACH FLAVOR WHERE YOU TASTE IT ON YOUR TONGUE.



NAME ANSWER KEY

WHAT A TEAM WE MAKE!

TASTE AND SMELL TOGETHER..........

TO FIND OUT HOW YOUR SENSES OF TASTE AND SMELL WORK TOGETHER DO THESE EXPERIMENTS AT HOME.......

TASK #1

YOU WILL NEED: 2 PIECES OF MINT FLAVORED CANDY.

HERE'S WHAT TO DO: TASTE THE MINT. CAN YOU SMELL IT WHEN YOU BREATHE, TOO? TAKE THE MINT OUT OF YOUR MOUTH. NOW HOLD YOUR NOSE SHUT AND TRY TO TASTE THE MINT. DESCRIBE WHAT HAPPENED.

CANNOT TASTE THE MINT WITH THE NOSE SHUT

TRY THE SAME EXPERIMENT WITH SOME OTHER FLAVORS.

TASK #2

YOU WILL NEED: 1 SMALL PIECE OF ONION A HELPER
1 SLICE OF APPLE A BLINDFOLD

HERE'S WHAT TO DO:

1. PUT THE BLINDFOLD ON. HAVE YOUR HELPER GIVE YOU EITHER THE APPLE OR THE ONION. TASTE IT AND TELL WHAT YOU THINK IT IS. TASTE THE OTHER FOOD.
2. ASK YOUR HELPER TO GIVE YOU ONE OF THE FOODS WITHOUT TELLING YOU WHICH ONE. HOLD YOUR NOSE AND TASTE THE FOOD. CAN YOU TELL WHICH ONE IT IS? TASTE THE OTHER FOOD WITH YOUR NOSE STILL SHUT.
3. WHEN IS IT EASIER TO TELL WHAT YOU ARE EATING?
   WHEN YOU CAN SMELL IT
4. WHY DO YOU THINK FOOD DOESN'T TASTE AS GOOD WHEN YOU HAVE A COLD?
   YOU CANNOT SMELL IT

NAME ANSWER KEY

YOUR NOSE KNOWS

SENSE OF SMELL

ANSWERS WILL VARY

DIRECTIONS:
OPEN EACH BOTTLE AND SMELL. WRITE WHAT YOU THINK EACH SMELL IS NEXT TO THE MATCHING NUMBER.

1. ______ 4. ______
2. ______ 5. ______
3. ______ 6. ______

WHICH OF THE SMELLS DID YOU LIKE? ______

WHY? ______

WHAT SMELLS WOULD YOU MISS THE MOST IF YOU LOST YOUR SENSE OF SMELL?

HAVE YOU EVERY SMELLED SPOILED FOOD? ______

HOW DO YOU THINK YOUR SENSE OF SMELL WOULD KEEP YOU FROM EATING SPOILED FOOD? ______

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NAME Answer Key

SENSE OF TOUCH

HOW FOOD FEELS IN YOUR MOUTH IS IMPORTANT.

TASTE EACH FOOD OR DRINK AND WRITE WORDS TO DESCRIBE HOW IT FEELS IN YOUR MOUTH.

HERE ARE SOME WORDS YOU CAN USE:

HARD	COLD	WET	CRISP	SMOOTH
SOFT	HOT	DRY	OILY	ROUGH

FOOD OR DRINK	HOW IT FEELS IN YOUR MOUTH (USE AS MANY WORDS AS YOU CAN)
1. Answers will vary	
2.	
3.	
4.	
5.	

TASTE SOME FOODS AT HOME TO FIND OUT HOW SOME DIFFERENT FOODS FEEL.

HERE ARE SOME IDEAS OF FOODS YOU CAN TASTE AND COMPARE AT HOME:

TOAST AND PLAIN BREAD
MASHED POTATOES AND RAW POTATOES
PEANUTS AND PEANUT BUTTER

DID YOU KNOW THAT COOKING FOOD SOMETIMES MAKES IT TASTE DIFFERENT JUST BECAUSE IT FEELS DIFFERENT ON OUR TONGUE?

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NAME Answer Key

SENSE OF HEARING

EAR

BEFORE YOU TEST YOUR SENSE OF HEARING ON FOOD, LISTEN TO THE SOUNDS AROUND YOU FOR ONE MINUTE. MAKE A LIST OF AT LEAST TEN SOUNDS YOU HEAR.

1. Answers will vary	6.
2.	7.
3.	8.
4.	9.
5.	10.

WHAT SOUNDS ARE MADE WHEN YOU EAT FOOD? LIST ALL YOU CAN THINK OF.

____

WHAT ARE THREE CRUNCHY FOODS?

1. ______________
2. ______________
3. ______________

-HOT-
POPCORN

WHAT SOUND DOES WATER MAKE WHEN YOU SWALLOW IT?

____

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NAME Answer Key

SENSE OF SIGHT

EYES

SOMETIMES YOU KNOW WHAT A FOOD IS EVEN IF YOU CAN'T TASTE IT, TOUCH IT, OR SMELL IT. YOUR EYES TELL YOU A LOT ABOUT A FOOD.

CAN YOU TELL THESE FOODS APART WITH YOUR SENSE OF SIGHT?

APPLE

ICE CREAM CONE

1. WRITE WORDS THAT DESCRIBE HOW THESE FOODS LOOK. Answers will vary

APPLE: ______________________________

ICE CREAM CONE: ______________________________

2. NAME SOME FOODS THAT MAKE YOU HUNGRY JUST BECAUSE THEY LOOK SO GOOD.

____

____

____

____

3. WHAT WORDS CAN YOU USE TO TELL HOW THESE FOODS LOOK:

PANCAKE: ______________________________

WATERMELON: ______________________________

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